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WELCOME



The only thing better than a gadget that does something amazing is one that also manages to look amazing while doing it. Apple's always known this. Form can't take a backseat to function. Well, it can, but then you end up with premium-priced devices that feel like cheap ones and customers that feel hard done by.

Samsung has had to learn it the hard way. There's a reason the S6 Edge+ (p. 8) is getting the sort of praise usually reserved for Cupertino's products: its design. It looks and feels beautiful.

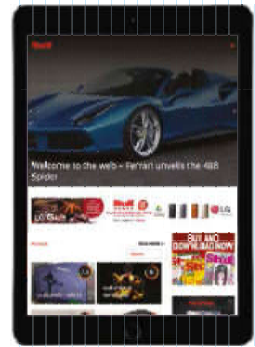
Beautiful and expensive.

Beautiful things don't have to be expensive, but they often are. Because spending all of that extra time on design doesn't come cheap. We've collected some of the finest examples of **design in tech** (p. 39) for you to peruse, ogle and consider taking a second bond in order to acquire.

And, if you do actually buy anything you see, our selection of the best **smarthome cameras** (p. 59) will help you keep an eye on it and, as many now include speakers and microphones, can also be used to scare the pants off friends and family. Best you start working on your impression of a disembodied voice from beyond.

On the opposite end of the spectrum, we've scoured the globe for our **Thrifty Fifty** (p. 64) – the best apps at everyone's favourite price point, free.

And what would Stuff be without something fantastic and speculative? Still a fine and informative publication, that's what, but don't let me get side-tracked. This month's **Techspedition** (p. 55) takes a look at the EmDrive, either the greatest innovation since the combustion engine or modern engineering's equivalent of alchemy, depending who you ask. We're hoping it's the former, because who wouldn't want to be able to fly from London to New York in under an hour? **\$**



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... and a word about prices
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REMEMBER, the next monthly issue is ON SALE 19 Oct

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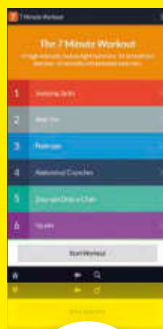
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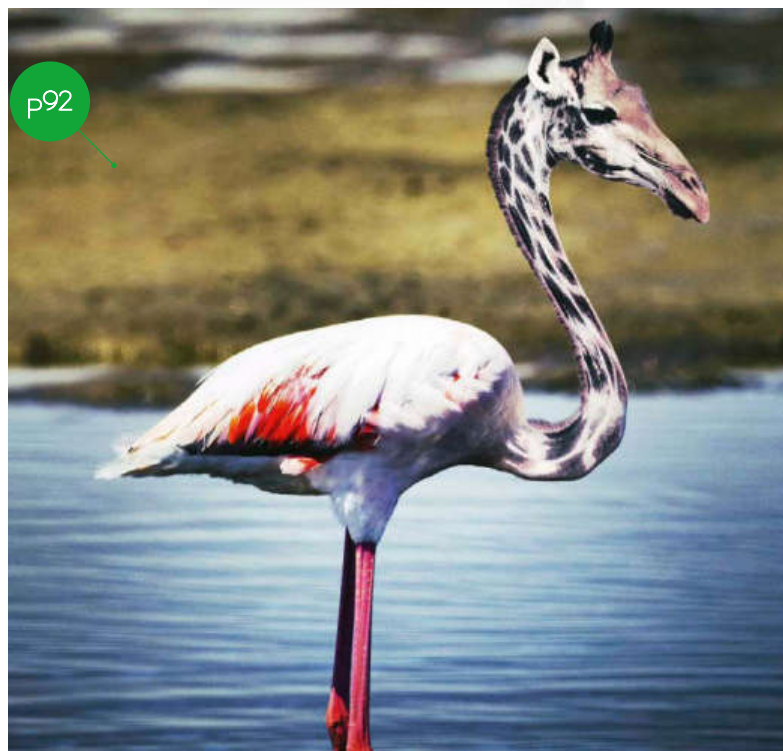
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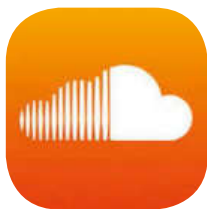
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TOP 10 OF EVERYTHING

Looking to buy something but need a bit of advice? Turn to our *Stuff* Top Tens: our expert listings of all gadgetry, from **p1021**



MSI GT80 Titan

★★★★★

A loud and proud PC gamer
p104

SAMSUNG

Dual edge display. Just got bigger.



SAMSUNG
Galaxy S6 edge | S6 edge+

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S

T

HOT
FOUR
#1BIGGER,
BETTER,
EDGIERSamsung Galaxy
S6 Edge+

We have trouble with the concept 'too much of a good thing', a shortcoming that has landed us in casualty more than once. Fortunately, Samsung shares our exuberance and so it is that we now have a bigger version of the Galaxy S6 Edge. That means more of the glorious dual-edge 2K screen, now biggerised from 5.1in/13cm to 5.7in/14.5cm. A difference, remarkably, that leaves it no thicker than the normal S6 Edge, despite containing a bigger 3000mAh battery that can now, says Samsung, be fully charged in just 90 minutes. The octa-core Exynos processor from the S6 and S6 Edge is on duty in the Edge+, but the RAM has been increased from 3GB to 4GB. The cameras are also the same – 16MP and 5MP – but fun new features such as Periscope-style Live Broadcast and Video Collage liven up proceedings. The only point in which we're split on our 'more is better' philosophy is storage: the Edge+ will come only in 32GB or 64GB versions. Still, we'll happily eschew the 128GB option in favour of yet more of that amazing screen.

Ashot as... a 5.7in Vetkoek with 4GB of JAM
[Rtba \(due October\)](#) / samsung.com/za

WHERE'S
MY NOTE 5?

Though the S6 Edge+ is already available in South Africa the Note 5 is only expected in November. At least we're getting it, though, unlike Europe. Not that we're smug about it or anything.



U

F

F

25 PAGES
OF THE BIGGEST
STORIES FROM
PLANET TECH



THAT'S THE WAY I SWIPE IT

In addition to People Edge for quick access to contacts, there's the new Apps Edge: a stack of app shortcuts along the side. Swipe in from the edge once for People, twice for Apps. Handy.

JUST MY TYPE

This clip-on keyboard cover was a... surprise, but a wiser spend might be the wireless charger. Samsung says it can charge in two hours—just 30 minutes slower than the plug.



MUSICCAST
YOUR LIFE**YSP-5600**

This audacious soundbar promises sound that surrounds you (thanks, Dolby Atmos); it streams film soundtracks to any of your MusicCast devices.

R33 000, R40 000
with subwoofer

**GRAND PIANOCRAFT
MCR-N870**

A micro hi-fi in aluminium so coarsely brushed you can file your nails on it, with CD, FM radio and USB input; it supports hi-res and streams including Apple Music.

Rtba

**WX-030**

Yamaha's version of the Sonos Play:1 is a dinky 24x16x11.5cm, and like all other MusicCast products it does Bluetooth and AirPlay streaming in addition to Wi-Fi Direct.

R5 600

**B&W T7**

Yep, this isn't Yamaha – but MusicCast will extend to any speaker you connect to it. You can even hook up your phone to any device and stream music through it.

R5 500 /
audicoonline.co.za



CAN YOU GET IT?

You're going to want an uncapped internet connection for ShowMax (or a very big cap) and at least a 4Mbit/s connection, though the company claims 2Mbit/s will do.

RESTIO MINI ISX-80

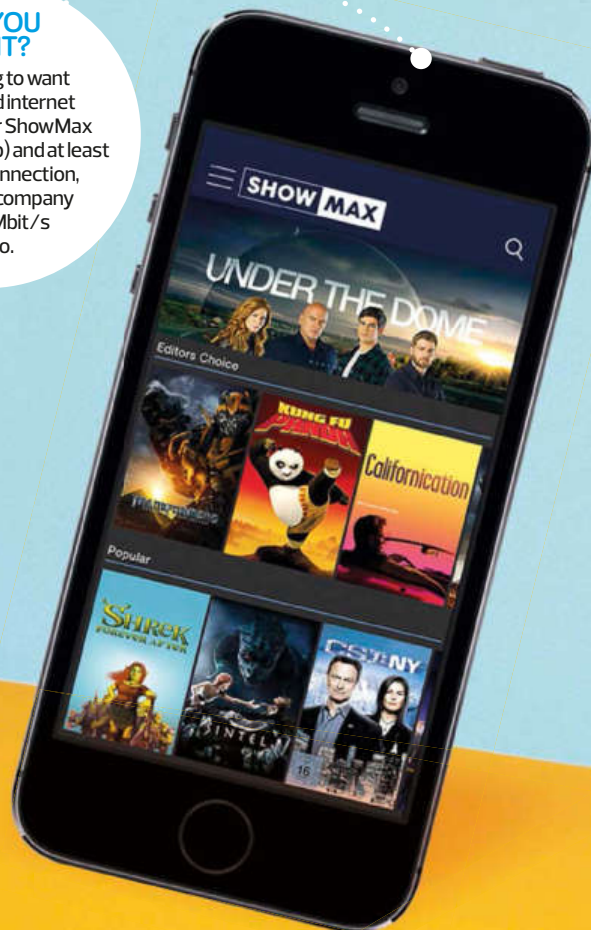
A stylish stereo frontman for your MusicCast set-up, the ISX-80 (Rtba) works with Wi-Fi, Bluetooth and AirPlay. Which it needn't look too smug about, as all the MusicCast products do.

HOT FOUR #2

MULTIFARIOUS ROOM MUSIC
Yamaha MusicCast System

The term 'hi-fi', once synonymous with VU meters and knob feel, has been co-opted by the likes of Sonos to apply to faceless, pockmarked oblongs, objects as beige and soulless as the Joss Stone records that inevitably leak out of them. Yamaha's fighting back. MusicCast is not just a new range; it's a new ethos (or perhaps a communication protocol) that allows all equipped devices to form part of a single musical entity. Whether it's a micro hi-fi, a soundbar, a set of active speakers or even, yes, a faceless pockmarked oblong, if it says MusicCast on it, it can be controlled via the MusicCast app. If it's playing in the CD player, Spotify stream, radio or even analogue input of one item in your house, it can emerge from all. Viva variety!

Ashotas... multi-room grooving
Rtba / za.yamaha.com



HOT FOUR #3

I STREAM, YOU STREAM
ShowMax

Before Netflix swoops in to make a bid South Africa's nascent streaming market – which it's threatened to do before the end of next year – Naspers has launched its own streaming video service. Ta-da!

ShowMax, which works on LG and Samsung's smart TVs, browsers, Android and iOS – assuming you have a decent internet connection – offers a one-week trial and then costs R99/month. What's on offer? Content from studios like CBS, HBO, MGM and Time Warner plus piles of local content. More than 10 000-hours worth, in total. Binge watchers are set, assuming that is, they haven't binged watched everything worth seeing already.

Ashotas... your TV after a GoT marathon
R99/month / showmax.com



HOT
FOUR
#4

SPENDTHRIFTY IS THE NEW SEXY

Motorola Moto G

Sometimes marvels come not in gilded dresses and pointy shoes, but in the quiet majesty of common sense. The Moto G has always been thus, but this latest version attains an even higher level of unpretentious desirability by adding a 13MP camera and IPX7 waterproofness. That means what was a useful if somewhat disposable Android phone is now more useful (better photos) and more up to the kind of roughhousing that a low-budget phone tends to get. There are two versions, both with a 5in/12.7cm 720p display, a Snapdragon 410 processor and microSD expansion. The 8GB version has 1GB of RAM, whereas the racy 16GB version gets 2GB. A dignified lack of whistles and bells should mean this smartphone can keep its 2470mAh for at least a day, and the very latest version of Android Lollipop OS should make you feel a little bit special.

As hot as... 'buy one, keep R5 000' deals.
R3 000 (8GB), R4 400 (16GB)
[/ motorola.com](http://motorola.com)

HEADING UP THE SNOOTY END OF THE MARKET



MOTOROLA MOTO X STYLE

A big high-end phone that will probably still undercut its rivals on price, the Style has a 5.7in/14.5cm 1440p screen, Snapdragon 808 processor and 3GB RAM. It has, against the current trend, a microSD card slot.



MOTOROLA MOTO X PLAY

Around about R6 000 will get you something in between the Moto G and the Style: a 5.5in/13.9cm phone with a durable, water-repellent cover. It has a whopping 3630mAh battery, good for two days' use, says Motorola.

We started taking pictures
from the ground.

But we wanted to do something different.

So we started climbing rooftops and
taking pictures of the city.

These are places where maybe only
ten or fifteen people have been.

So it's really interesting to reveal them to others.

Usually people are scared of heights and
we are trying to show them how beautiful they can be.

At first we were climbing for feeling.

Now it's more about art.

A city looks quite different from high altitudes.

We climb because we want
to share a different perspective.

But we're still crazy.

come

and

see

Canon

Search: Canon come and see

ALIENS ARE HARVESTING OUR SKYLAKES

Alienware 17

Rtba / alienware.com



Dilly-dallying between a MacBook and a MacBook Air? Pft. This 4K-gaming megabook is tons more fun.

● **First word: Skylake.**

Barely had men and women in dashing white biosuits cut Intel's latest processors from their dry-ice-infused birthing chambers than men and women in jean shorts and Capcom T-shirts yanked those new chips out of their hands and sped them to Alienware's gaming garage. Intel says the new Skylake chips offer greater power out for less power in, which you'd expect from a new processor, but they also work with newer, faster kinds of

memory and are much easier to overclock. That means they're pretty much designed for gaming rigs, although with the higher-end chips running eight 4.4GHz cores, we're not sure overclocking will be strictly necessary.

● **Second word: 4K.**

Is that a word? Anyway, last year's Alien 17 had a 1080p screen, and very good it was too, and you can spec it for the 2016 model if you like. But there's a 17.3in/44cm, 3840x2160 IGZO IPS 400-nit screen that you would have to literally punch us out cold not to tickbox. Of course, HDMI output to external monitor, yadda-yadda,

but the main screen is why you're buying a gaming laptop.

● **More a phrase: USB Type-C.**

Apple made people look for it, so we're mentioning it, and this one supports huge, blazingly fast file transfers via Thunderbolt.

● **Final word: graphics.**

Go for the maximum-spec, 3.7kg Alienware 17 and you'll get a beast of a card built in: an Nvidia GeForce GTX 980M with 4GB of GDDR5. Pick something more portable, though, and you can plug it into Alienware's Graphics Amplifier, which will run powerful desktop graphics cards via a cable. Whoomf!

FOR REALLY LONG PLANE JOURNEYS, ONLY A 4K DISPLAY, A GTX 980 AND 16GB OF DDR4 RAM WILL DO



YOU WANT POWER? MEET THE LENOVO P70

● See your Skylake, raise you Xeon

Lenovo's ThinkPad P50 and P70 are in the privileged position of being the first notebooks to use Intel's professional-grade Xeon processors. And, yes, they're sixth-gen Skylake ones at that. Key benefit? This means you can install up to 64GB of RAM. (We're not sure why, either.)

● Solid terabytes

The 17in P70 has space for four superfast PCI Express drives. This is a *laptop*, don't forget. Out of the box you get a 2TB HDD and a whopping 1TB solid-state whizz-o-drive. It also has two Intel Thunderbolt 3 ports, which use the same physical connectors as USB-C but with 40Gbps speeds.

● Nvidi-upgrade

There's a choice of Full HD touch or 4K UHD screens, naturally, but both the P70 and the 15in/38cm P50 have the two words 'Nvidia Quadro' printed casually on the spec sheet. Again, this is pro-level componentry, geared more towards CAD than gaming, but if you want a world-beating laptop, this is it.



Smarter than your average reviewer SONY SMARTBAND 2

Sony's out for a piece of your heart. They've got a whole new Smartband 2 on the way to market, with a heart-rate sensor, your usual accelerometer and gyro functions and waterproofing – ala the Xperia Z series – for fitness fans to look forward to. And they're being platform-neutral with their multicoloured Smartband 2 wrist-straps, any Android 4.4 or iOS 8.2 device will be supported at launch. So they're out for a piece of your wallet as well. Sony's claiming a five day battery, dropping to 2 days if you're tracking your heart constantly.

That sounds like money well spent.

R1800 (due Q4 2015) / sonymobile.com



Standard's the name, value's the game DJI PHANTOM 3 STANDARD

DJI is on a roll, having already launched three quadcopters in the past year – the Inspire 1, the Phantom 3 Advanced and the Phantom 3 Professional. Now it's unveiled a fourth, the Phantom 3 Standard, and the big story here is price: it's set to be a lot cheaper. Camera specs remain strong: 12MP stills and 720p, 1080p or 1520p video with the same three-axis gimballed stabilisation. Compromises are the lack of livestreaming, a shorter range and a more limited controller. But there are some flying features not yet seen on Phantom drones, including a user-tracking 'follow me' function, waypoint navigation and a 'point of interest' mode. Seems the name 'Standard' was a little unfair.

Rtba / dji.com

START MENU

The latest startups, crowdfunded projects and plain crazy ideas

KICK-STARTER

Nippy vocation NIPI

The laws of thermodynamics clearly state that you can't leave a beer out in the sun and expect it to get cold. Or can you? Nipi is a cooler that runs on solar power, meaning you can leave it on a roasting hot beach and it'll keep your cans extra frosty. Because clouds have a habit of wandering into the situation, it also packs two whopping 14,000mAh batteries for six days of power. To answer your next question, yes you can charge your phone from it, and to answer your follow-up question, yes it does have lights. As we write this, it's just crested its modest \$60k goal, which calls for some sort of cool, fizzy... ah, thank you, Nipi.

R2650 / nipicoolers.com



BACK IT

STACK IT

SACK IT

INDIE-GOGO

INDIE-GOGO

KICK-STARTER

KICK-STARTER



Out of the frying app

SMARTPROMPT PAN

From the nation that brought you liquid cheese and microwave meal trays, here is a pan that syncs with an app. Cooking instructions go one way, to the screen on the handle, while boiling or burning alerts go back the other way, to your notification zone.

R1330 / keyingredient.com



Cuddly GPS TREKACE

A wrist-mounted GPS device: make fellow ramblers think an alien arm-hugger is leading you involuntarily into the wild, using light and vibration alerts on its direction pointers! Get an awesome tan mark! Pre-plan your pistes in the TrekAce app and amaze your fellow skiers with your 'intuitive' navigational choices!

R2650 / trekace.com



Trebled water AQUA

The angular aluminium Aqua is an amp that sits in line betwixt your phone and headphones. It's battery-free, because it uses the power from your Apple or Android phone's output. It claims to make your grungy rhymes sound just as sweet as if you walked forever in the Royal Albert Hall.

R800 / molu-aqua.com



Petit cube WOOD KUBB

Your computer is ugly. So says Jean-Christophe Agobert, but then he would – he's trying to flog you one of his mini-PCs in a wee wooden box. Mind you, once you see one in actual real wood (three finishes on offer), with a Core i5, 8GB RAM and 256GB SSD, and both mini HDMI and mini DisplayPort, it's really rather... *mignon*.

R700 / kubb.eu



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*Recommended retail price - Excludes installation - SA only - Monthly subscription fee payable (R699) together with an access fee (R80) - DStv Catch Up and DStv Now only available to DStv Premium customers with active PVR - Terms & Conditions apply - Competition is running from 1 August 2015 to 6 September 2015 - E&OE



GOTHAM'S NEW BAT-SIGNAL

Would you care more about endangered species if they stared down woefully at you from iconic buildings? It might not make an impression on hunters, who take actual delight in incorporating the heads of their victims into their interior design. A different tack, then: let's send those people the electricity bill from all 40 of the 5K projectors used for Projecting Change, a live video exhibition that lit up 33 floors of New York's Empire State Building in August. Director Louie Psihoyos, founder of the Oceanic Preservation Society, described the event as a "weapon of mass instruction".

NEWS FEED

Alphabet

GOOGLE IS NOW CALLED ALPHABET

That is, Alphabet is a new company set up by Google that includes the brand but allows it to separate its crazier stuff – web balloons, etc – from Google, its internet and Android brand. The URL (abc.xyz) is somewhat deadened by a flat 'zed'.



vodacom

VODACOM VIDEO PLAY

Vodacom's got a strange entry into the world of streaming in Video Play, a service which will see users purchasing minutes instead of data. Pay R5, get 30 minutes. Which lets you download 30 minutes of video from Vodacom's app. Overnight. We're going to test the crap out of this one.



ONE SMALL SALAD FOR MAN...

International Space Station astronauts have, for the first time, eaten food that was germinated and grown in space. The tech used to produce their romaine lettuce may not get us to Mars, but it will have an impact on agriculture in tricky corners of Earth.

Wake up! Time to DAC AUDEZE DECKARD

A product named after Harrison Ford's character in *Blade Runner* already violently twitches the needles on the geek detector. The fact that it's been designed by BMW Designworks gives them another jolt, before the fact that it's a headphone amp/DAC sends them off the scale and breaks the machine. So there's not much point bringing in that it can handle up to 32bit/384kHz audio, or that it has a (wonderfully tactile) Gain switch for preamp use – we're already done here.

R10 000 / cplanaudio.co.za



Mind over muddier HNF HEISENBERG XF1

Mountain biking ought to be rider and machine versus nature. In practice, it's rider and neurosis versus machine. Is it set up right? Why's that bit squeaking? Have I got the right tyres on? This electric-assisted bike, designed with the help of the BMW 'i' division, should mean fewer mechanical worries – the wild-looking linkages and swingarm are an attempt to isolate the motor and drivetrain from the suspension, and it uses a high-tension belt drive with an expensive Rohloff hub gear setup. It won't help you with your brain, though.

R127 000 (import) / hnf-heisenberg.com

FUTURE STUFF COMPETITIVE SLEEPING

The Nintendo patent that turns ZZZs into points

Nintendo's days as a console-focused gamesmith are about to be history, as it explores smartphone gaming. But the firm has also been poking around in other, less obvious markets.

Last October, Nintendo revealed plans to launch a 'Quality of Life' platform in 2016, with a non-wearable sleep tracker that would use cloud servers to analyse your slumber. That's all we heard at the time, but it was certainly an unexpected twist. Now, a newly revealed Japanese patent application

(filed last year) shows a bit more about what they might have in mind. It shows a bedside dock holding a device – most likely a smartphone – and speakers... and there's also a surprise element in there.

The unit has a built-in projector, which displays an image on the ceiling above your bed. The patent application says the device can detect a user's emotions – which lines up well with the information revealed last October – and uses a microphone and camera (probably the one on the phone)

to gather that data. Your sleep data – body temperature, pulse rate and other details – are sent to the cloud, and what you get back is a sleep score. Gamification!

If it is a smartphone in the dock, then perhaps a Nintendo app tracks you during the day and then tabulates all that health data together. Whatever the case, the image displayed contains your latest health stats, letting you start the day with an affirmation of your success... or maybe motivation to do better.

WIN

WIN 1 OF 8

 **click**TM 7
tab



Android 5.1
Lollipop



Quad Core
Processor

8

GB
storage

[7.0"]

1024x600 TN
LED Display

WORTH
R1 500
EACH



AVAILABLE FROM

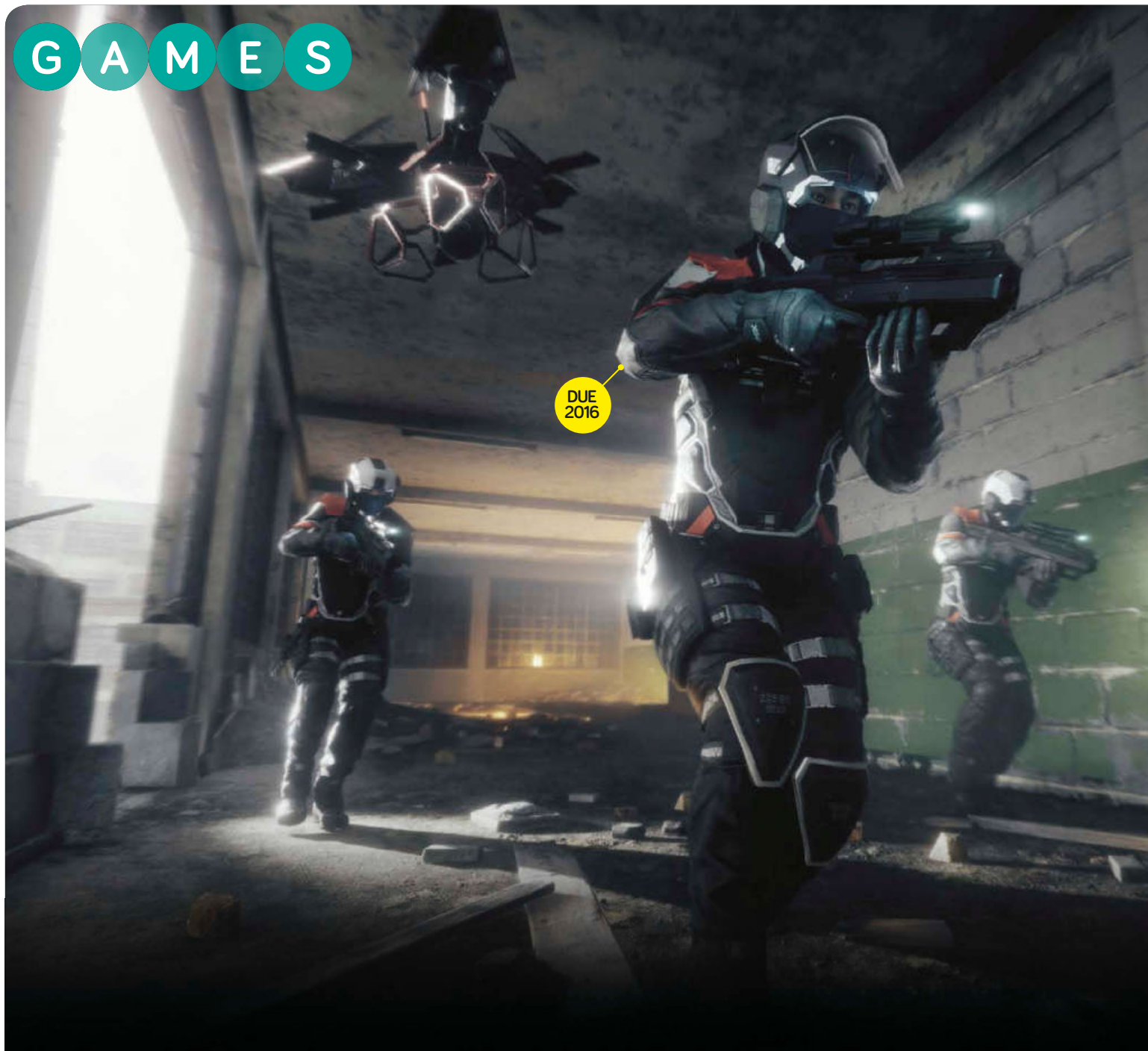

CONNECTION

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Readers must include their names and surnames, contact number, email address and physical address.
Valid from September 21st to October 16th. Terms and Conditions on the Editor's Letter (page 2).

HURRY!
COMPETITION
CLOSES
16 OCT 2015



FIRST PLAY HOMEFRONT: THE REVOLUTION Xbox One, PS4, PC

There are obviously some people who invest in games but don't play them. Why is this obvious? Because only someone who hadn't played the weird, horrible experience that was the first *Homefront* – memorable plot points included watching civilians being executed in front of their families, and hiding in a mass grave – would employ people to make a sequel. But this is a new *Homefront*, by a new developer, and it's surprisingly good.

The mad premise remains: a technologically advanced North Korean regime has invaded the

US. To make this anything other than a bizarre satire, it's set in an alternative reality in which North Korea isn't small and starving and America has forgotten where all the guns are.

Where the first game kept you on rails throughout, this is an open-world shooter that feels a bit like a *Far Cry* game: there are vehicle patrols, lots of points at which to pick up missions, and while you can build new weapons, you're not a tank-warrior. Engage the well-armoured Korean People's Army in open combat and you'll come off worse.

The game has a lot to offer gadget fiends, with highly customisable weapons and the ability to hack enemy tech. Pick up an RC car and you can drive it under a KPA vehicle and then detonate it, or use it to turn the turret on its own soldiers.

It's all nice-looking – grimy, rainy, smeared with blood and burnt at the edges – and the ferocious power of the KPA creates a feeling of oppression without any need for shock tactics. For a title that should never have been made, this has turned out really well.



THREEDOM OF EXPRESSION

CRACKDOWN 3

Xbox One

With all their brotastic hoorah-ing and stern-faced grittiness, modern shooters don't always offer much in the way of lighthearted escapism. Sure, saving the world is serious business, but *Crackdown* games have never been afraid to put fun first. With its cartoonish aesthetic, larger-than-life characters with Spider-Man agility, transforming transport and a classic good-vs-evil narrative, the third instalment is no different – but it's in multiplayer mode where the real fun starts.

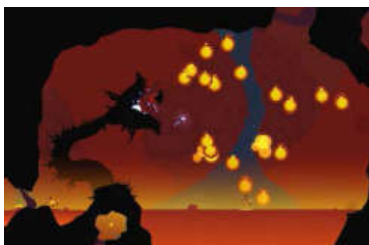
Here, every single structure can be razed to the ground. Apparently your Xbox isn't powerful enough to cope with the chaos that can ensue, so you can call in backup from Microsoft's cloud-based servers.

That destruction scales all the way down to individual bullet holes. Draw a circle of them on a wall and the middle will fall out, giving you a new vantage point. Weaken the building enough and you'll need your hard hat.

In *Forza 5* and *Titanfall* this kind of cloud stuff happened without anyone noticing, but when a skyscraper collapses in *Crackdown 3*, you'll definitely know about it.



UPCOMING INDIES



FORMA.8 PS4, Vita, Wii U, PC, Mac, iOS

If you like artful indie games, you are going to love this *Metroid*-esque exploration game. Its illustrated style is made up from layers of vector graphics which create a weird landscape of contrasting colours. The premise is pretty compelling, too: you are a tiny probe searching for an energy source on a mysterious dead planet.



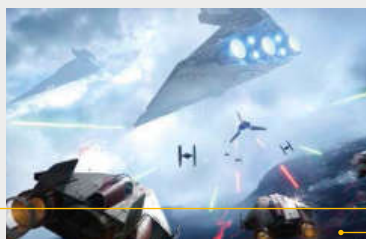
THE INTRUDER PC

Inspired by nightmares and creepy on a par with *Alien Isolation* and pant-browner *Slender*, *The Intruder* is a quiet, cold place full of things that will follow you, staring with unblinking eyes. Many of these things will only stop chasing you when you turn and shine your torch at them; then they wait for you to freak out, run for it and die.



CLOUD CHASERS Android, iOS

If the rich steal all the clouds and leave the rest of us to die in the desert (hey, it could happen), playing this will be good practice. You play a father and daughter wandering a procedurally generated sandscape; the situations you encounter form a kind of interactive fiction, but you also get to go in a makeshift glider and hunt clouds.



INCOMING

OCTOBER

- ROCK BAND 4
- RAINBOW SIX SIEGE
- ASSASSIN'S CREED SYNDICATE
- GUITAR HERO LIVE
- HALO 5: GUARDIANS

NOVEMBER

- FALLOUT 4
- STAR WARS: BATTLEFRONT

ALL-IN-ONE DESKTOPS

Three new beasts of all-you-can-eat processing power, memory and big-screen beauty threaten to invade your study



FOR SEXY WINDOWS



Asus Zen Z240IC

Since records began — around 2005 — Asus has been your go-to company for a Windows PC that's sexy enough that it needs to be hidden in a cupboard when your MIL comes round. This new Zen has a 23.8in/60cm panel, like the Acer on the right, but features a RealSense 3D camera and gaming-standard Nvidia GTX960M graphics. It'll be cheaper than the iMac, but not much cheaper.

Rtba / asus.com/za

FOR YOUR RETINAS



Apple iMac Retina 5K

Nectar for your eyes, a balm for your wallet — Retina iMacs have moved a little closer to being affordable. A 3.3GHz i5 processor, 8GB RAM and a 1TB HDD hide behind that astonishing 14-million-pixel screen, but we'd advise investing in more RAM (up to 32GB) or a faster solid-state drive. The 3.5GHz version weighs in at a hefty R35 000, but it's still less than the launch price.

from R30 000 / apple.com/za

FOR ALL YOUR DIGITS



Acer Aspire Z3-710

Acer's high-end Aspire is a 38mm-thin slice of iMac-alike for a lot less cash. It has a 23.8in/60cm, 1080p display with 10-point touch — though if anyone walks in on you with all ten fingers on the screen, questions are going to be asked. Get a free upgrade from Windows 8.1 to 10 now that it's out, and upgrades to 2TB or 8GB RAM if you want to trade some affordability for awesome ability.

Rtba / acer.co.za

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SUN	10:00-16:00

rAge
expo

www.rageexpo.co.za

NOKIA TECHNOLOGIES OZO

Rtba / ozo.nokia.com

Ye gods, what is this many-eyed horror show?

There are many things we don't know about this VR image capture device. We do know it marks part of the New Age of Nokia, a renaissance fuelled by shunting its mobile phone business off to Microsoft. We don't know whether OZO makes the low humming noise we imagine, the kind of insistent, malevolent buzzing that an SABC radio engineer would rustle up using a clockwork toy motor and a toilet roll.

How is it that it looks both dangerous and baleful?

Desire and fear, borne of its ability to see absolutely everything all the time and not blink or turn away. OZO has eight synchronised cameras and eight equally synchronised microphones in order to create 360° spatial video and sound for VR headsets. We don't know the specs for the sensors – Nokia is drip-feeding the info over staggered video releases – but we do know this isn't for funsies. OZO will cost many, many thousands of rands and is designed for use by professional camera-slingers, not you on your holidays.

So VR cameras are a thing now?

Yep. GoPro recently announced the future release of a spherical mount that holds six of its action cameras, and the 360Fly is a waterproof action cam that shoots in all directions at once. But OZO is more powerful than that: able to beam instant, coherent VR rushes to a director wearing an Oculus Rift headset... and render the final 3D footage in double-fast, budget-saving time. What we'll never know, probably, is how OZO feels about all this.



OZO'S EIGHT
CAMERAS AND
MICS CREATE
360-DEGREE
VIDEO AND
SOUND FOR
VR HEADSETS



For Suissophiles, it's the next best thing to a cuckoo clock in your backpack

Serious choice CASIO EDIFICE EQB510D

Red Bull Racing's Christian Horner is the poster model for this new Casio chronograph. Bluetooth connection to your phone means that the watch can swiftly adjust its time to that of the helipad you just landed on, while a second dial shows the time in one of 300 'home' cities around the world. You can also get email notifications. Not functionality to threaten the Apple Watch, but then the Edifice is solar-powered, so never needs charging. Nice, but maybe this is all a bit serious for you...

[R8 000 / thecasioshop.co.za](#)

Swiss cheese SWATCH DIE GLOCKE

It's got a mini cowbell! Um. And a picture of a cow and some very Swiss detailing, this being from Swatch's latest Grützi All! collection. It's powered by a battery, the strap is leather, the case is plastic and it's merely splashproof. Other watches in the collection have winter jumper, milkmaid pinafore or hairy cowskin straps – none of which are likely to be seen on the wrist of a high-powered F1 manager any time soon. Well, maybe at the weekends. But not race weekends.

[R2 000 / swatch.com](#)



↓ DROP EVERYTHING AND DOWNLOAD...

Pac-Man Championship Edition DX R70 / Android, iOS

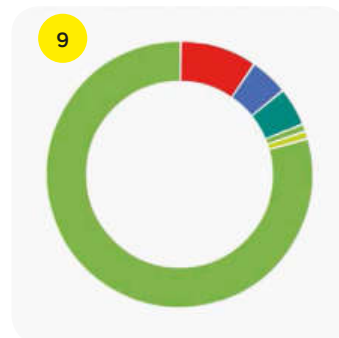
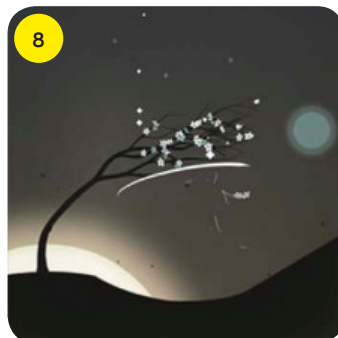
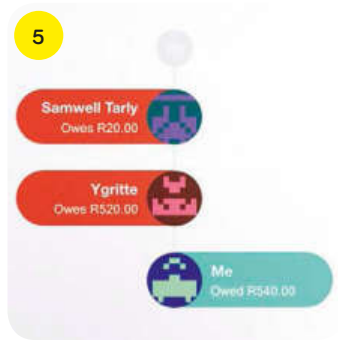
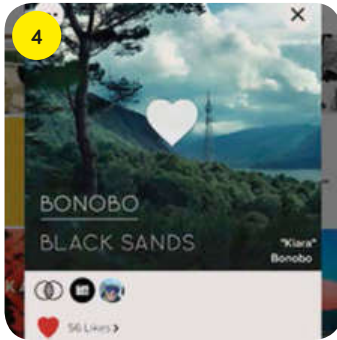
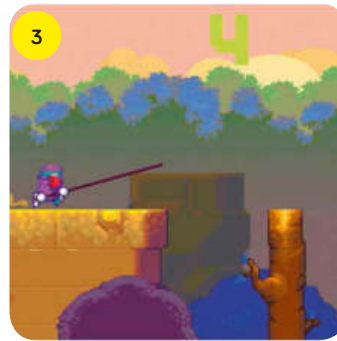
Championship Edition DX is Pac-Man's unruly grandkid, all hopped up on techno beats, neon widescreen mazes and mobile-friendly short-burst gaming. It takes the basis of the original 1980s coin-op classic, straps it to a rocket and lets rip.

Our spherical protagonist now has to contend with a maze that continually shifts. Eat all the dots from one half and a bonus

item appears on the other. Grab that and a new pattern of dots appears in the previously cleared area.

It's a testament to the quality of DX that its tardy appearance on iOS and Android (it debuted on XBLA several years ago) hasn't resulted in a dated game. It still feels fresh, essential and utterly compelling on mobile. In short, buy this one now.

This month's mobile must-downloads



122seven

Free / iOS, Android

Living on Salticrux by the 10th each month? Link your bank accounts, investments and loans to 22seven and it'll track what you spend and suggest things you can cut back on, like those daily double espressos.

2 Hexlock

Free / Android

To stop your kids accidentally opening your sweatastic Twitter feed or your parents 'accidentally' reading your texts, Hexlock locks certain apps (unlockable with a PIN) whenever you're on a certain Wi-Fi network.

3 Vault

Free / iOS

Will endless runners be endlessly appealing? Ask us a month ago and we say 'no', but ask us now and we say nothing, for we're too busy playing this charmingly retro fast-paced pole-'em-up.

4 Cymbal

Free / iOS

If you love the panel in Spotify that shows what others are listening to, or you miss sharing songs on This Is My Jam, then Cymbal is great news. Post a track you love, then snort at your friends' appalling taste.

5 Splittable

Free / iOS, Android

Some apps are fun, some offer a service. This one will literally save lives, because it helps you and your flatmates keep track of shared bills and costs. Full graphical disclosure, no need for anyone to die.

6 Nine

R17 / iOS

This visual to-do list lets you assign tags (of which there are, yes, nine) to photos that you take of things you want to remember. Say a friend's reading a good book: you snap it and tag it with Love and Buy and Read.

7 The Mesh

R32 / iOS

You love animals, but now you're going to learn how much you love animals. *The Mesh* forces you to play a mindbending numerical puzzle in order to get the points to unlock the beasts.

8 Prune

R65 / iOS

You could go out to a remote cliffside and carefully tend your own bonsai for the next 80 years, or you could play this relaxing tree-based prune-'em-up for the next 80 minutes. Your call, Mr Miyagi.

9 Fuelio

Free / iOS

Fuelio! The app that sounds more fun with an exclamation mark! Track your kilometres and petrol costs! Now the Pro features have been included for free, including cloud sync with Dropbox and Drive!

3 OF THE BEST

BACK 2 SKOOL

EASYBIB

Free /

iOS, Android
If your teacher demands references, then this app will auto-generate them from the ISBN or barcode of the book you copied all the bits from.

PERIODIC TABLE

Free /

Android

When we were young, the Periodic Table was a puzzle to be solved. Nowadays, it gives up its atomic secrets with a tap.

RE: SHAKESPEARE

Free /

Android

Samsung and the Royal Shakespeare Company have teamed up for this upbeat, contemporary workshop app.





GEEK
ON THE
ROAD



SURF SNOWDONIA

Stuff paddles into the world's longest man-made wave

Some things are a lot easier than they look. Driving, for example: a handful of men like to pretend it's difficult, but it's not, it's an absolute piece of cake. Similarly, acting is just pretending to be someone else, which is very easy indeed, cooking is just following basic instructions, and photography is literally pressing a button.

Surfing, on the other hand, is genuinely difficult. To find the right spot to catch a wave, you have to be observant and able to see patterns in a seemingly chaotic system; to get yourself there, you have to be physically fit and strong; and to actually paddle into a large wave and ride it, you have to be capable of relaxing in a violent physical situation.

At least, that's been the case so far, until a group of Spanish engineers made things a lot easier. Their company, Wavegarden, builds wave generators that fit into lakes and produce regular, perfectly formed waves.

Surf Snowdonia's 150m-long freshwater lake is home to the world's first publicly accessible Wavegarden: a long, thin cage runs down the middle of the lake, and inside the cage a hydrofoil plough the size of a people carrier runs

up and down, heaving clean, shoulder-high waves across the surface, once every three minutes. The experienced surfers on nippy little shortboards ride the wave at its peak in the middle of the lake, the intermediates catch it a little further down, and the beginners are swept up last on their foam boards and sent whooping towards the far shore.

This is to 'real' surfing what track cycling is to other forms of pedalsport. Just as the velodrome means no corners, directions or traffic lights, the Wavegarden means no waiting for the weather, no currents, no exhausting paddling out through pounding whitewater. You just get in, wait three minutes and enjoy.

Like track cycling, it trains you in one specific part of the sport, and in this case it's the best bit: the standing-up bit. We've been on surfing holidays where we've spent less time standing up on a board in a week than we managed in one morning at Surf Snowdonia. It is fantastic practice for any surfer and the most reliable way we've seen for a beginner to get a handle on those skills.

There's a flipside, of course – just as track cyclists don't get to

see a lot of mountains, surfing in a lake removes the exhilaration and satisfaction that come from learning how to safely and competently ride ocean waves. But it's far too much fun to spend any time thinking about that, and unbeatable training for the real thing. Which, as we've established, is harder than it looks.

SURF 'N' TURF A SOJOURN IN WALES



Zip up

You can sleep right next to the Surf Snowdonia lake in one of the wooden camping pods, which offer B&B from £500 a night. Try to avoid forgetting your sleeping bag; a towel is not a duvet.



Zip down

Less than an hour's drive away is the huge Penrhyn Quarry, formerly a slate quarry, now a zipline zip-park. The 'Big Zipper' is the highlight, with speeds up to a hilariously zippy 160km/h.



Zip out

Snowdonia is a long drive from most places that aren't already in North Wales (like, say, South Africa), but trains to nearby Llandudno Junction take under 3hrs from London.

ONEPLUS TWO EQUALS... WELL, AT LEAST FIVE

OnePlus 2

R5 000 (16GB), R6 050 (64GB) (import) / oneplus.net

DISPLAY
5.5in/14cm, 1080p
RAM 4GB
CAMERA 13MP back,
5MP front
DIMENSIONS
152x75x9.8mm
WEIGHT 175g



"Wood is the new gold!" we imagine OnePlus crying, hiding invites up its sleeve

This cut-price Chinese superphone offers the specs of a Galaxy S5 (and beyond), for a fraction of the price. Why wouldn't you get one?

● **The OnePlus One was sweet, cheap and hard to get.**

We loved it — and you did too, crowning it the *Stuff* Readers' 2014 Gadget of the Year. This new version is a toes-to-nose redesign, however, and one with some curious spec decisions. It has a 1.8GHz Snapdragon 810 processor, with the now flagship-standard 4GB of RAM, running OnePlus's own OxygenOS over

Android 5.1. It's a little bit shorter than the Samsung S6 Edge+ (see p12), but it's thicker at 9.8mm. The justification for that might be the comparatively huge 3300mAh battery that, along with the 1080p screen, should lead to a genuinely useful battery life.

● **It's a frikkin' laser!**

The megapixel numbers haven't changed but the addition of an improved sensor, optical image stabilisation and LG G4-esque laser focusing should prove exciting enough for ardent imagers. Well, they would if the microSD card slot hadn't been removed, leaving you with either 16GB or 64GB internal

memory options. Dual SIM slots are either salt or Savlon to rub in the wound, depending on how much travelling you do. And USB-C proves that this phone was spec'd during a blindfolded component pick'n'mix.

● **Buy now, pay never.**

It has a front-mounted fingerprint sensor that, OnePlus says, is quicker than Apple's reader. This would be just perfect for mobile payments, if that wasn't kiboshed by the omission of NFC. Very perplexing. Mind you, it's also very affordable — and due to the invite-only system, exclusive. But surely even non-conformists would prefer more consistent specs?

IT HAS A FINGERPRINT SENSOR THAT ONEPLUS SAYS IS QUICKER THAN APPLE'S READER



Noughties icon returns
KEF EGG WIRELESS DIGITAL MUSIC SYSTEM

Back in the hedonistic mid-2000s, gangs of stylish surround sound packages finally busted their way out of Camp Compromise and managed to both look good and sound good. The KEF 'Egg' KHT2005 package was the leader of the pack, and had many awards badges on its leather jacket. And now that iconic shape is back, but reborn in a two-channel wireless setup with built-in DAC. The speaker's still closely related to KEF's high-end speakers, so the sound should be good whether it's using the Bluetooth aptX, digital optical or miniUSB.

The price puts it right on the warpath of the Q Acoustics BT3.

R7 300 (import) / kefstore.co.uk



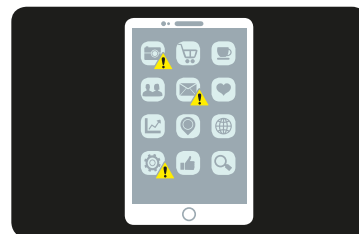
Read it and weep
GARMIN FORERUNNER 25

If the search for your activity tracker has been stymied by the breadth of Garmin's range, then don't skip to the end of this paragraph. Stay here, with this affordable GPS-equipped watch – it tracks sleep, daily activity and individual workouts, as well as displaying notifications. Perfect? Oh, but you read too far. Now we tell you Garmin has also launched two GPS handhelds, the Trex Touch 25 and 35. And two Edge GPS cycle computers, the Edge 20 and 35, as well as a higher-end 520 with live Strava segments. Not to mention Varia, the cyclist's traffic-sensing radar, and two swim-specific heart-rate straps. The final nail in your decision coffin: our Garmin Fenix 3 review on p76. We warned you.

Rtba / garmin.co.za

DECIPHER

ALLOW US TO EXPLAIN...



#6 THE CONSUMER PROTECTION ACT OF 2011

Wait. Hold on. This isn't going to be as boring as you think. It's not a Michael Bay movie either but the Transformers never have to pay for any of the things that just stop working. You do, generally speaking, and there might be a few things in the CPA that could save you cash (and heartache).

The CPA applies whenever you're purchasing a good or service in South Africa. Whether that's a car, toaster, tablet or cellphone contract, the CPA is active. But what does it all mean, Basil?

It means that you're entitled to a working product and there are strict stipulations about how that all functions. The Consumer Protection Act takes precedence over any agreement that a place of business might want you to think is valid – this is most important.

That means that, no matter what the store says, you've got six months to return a defective product. If you dropped it in a bath and it died, it's not defective.

YOU ARE ENTITLED TO RETURN DIGITAL GOODS WITHIN 6 MONTHS FOR A REFUND IF THEY ARE FOUND TO BE DEFECTIVE

Unless it's an Xperia Z2. But if just about anything else conks out, you can return it within six months and it has to be replaced, repaired or refunded. And here's the best part. The return is at the business' expense and you get to choose the reimbursement method. They cannot force a repair if you want a refund, for instance. The more you know...



FROM CUPERTINO WITH LOVE

Quick! Cast your mind back to what gadgets were like in 2004. It was the era of terrible cameras. A time when buying shiny new multicoloured covers to click on to your phone so that it matched your outfit was an entirely legitimate consumer decision.

Colour displays – whether on cameras or mobile phones – were rubbish. Every month Nokia had a newer, uglier, more ridiculous phone out. I mean, do you remember the N-Gage? Yuck. Or the Motorola RAZR? The Siemens M65? Business devices brought to you by Palm? Phew. It was awful.

Thankfully, 2004 has a few redeeming tech releases to ease the pain. It's the year I got my first iPod. The 4th generation Classic. At the time I'd never been as excited by any piece of technology – not even my first Pentium desktop PC. Ignoring the clamour for colour screens and a million buttons, Steve Jobs gave us this wonderful little white pebbly looking thing.

Brushed silver on the back. One round wheel in the front. It had a single colour display and about five menu options. It stored thousands of songs – something that was absolutely mind-blowing at the time. Eventually, I even bought a little FM broadcast connector so that I could broadcast music from it to an unused frequency and listen to it on my car radio. I was in love.

I loved the sound of that wheel quietly clicking as I spun it. I loved how it sat so snugly in my hand and how easy and natural it felt to navigate using just your thumb. I loved how simple the single-button interface made it. No frills. No excess. A device purely designed for a specific purpose. It was the first time I'd been so affected by design. It was minimal and functional and simply brilliant.

That iPod was with me for years and years. I auditioned songs on that iPod that I later used to make mix-CDs for girls I was hoping to impress. It was the main source of music at many a house-

party. When I moved to London and got my first job, I wiped the whole thing clean. I loaded my AC/DC collection onto it (32 disks, by the way) and listened to nothing but AC/DC while commuting for eight months.

On an autumn morning, I'd be listening to Angus Young riffs while strolling up Soho's rain-slicked streets, with an espresso in my hand and nary a soul in sight. I was young and free and invincible. Those moments are etched forever into my being, and it's only because of Steve Jobs and his little white pebble.

Eventually, I replaced it with an iPod Touch but that got lost in short order and I have never owned another dedicated music device. Music lives on phones now, and gets interrupted by WhatsApp alerts and Twitter notifications.

Today our mobile phones are the ultimate multi-tasking devices. Beautiful as they are, I don't think I'll ever love one like I loved that iPod. But that's okay. Things change. Technology moves

on. And I have the beauty and simplicity of that iPod to thank for making me more aware of design, of form relating to function, and for making me realise you can, in fact, love an inanimate object.



SPIN DOCTOR

Rob Forbes is a 5FM DJ who tweets about football, sports and music when he's not presenting, camped out in a casino waiting for people to let go of a car (long story) or raiding *Stuff's* storage cupboard. Catch him on 5FM between 13:00 and 16:00 every weekday.



Even better than the real thing LEGO TECHNICS AROCS 3245

Some of the romance of trucking has been lost of late, what with most of the country's big rigs seemingly queued up on one side of the N1 or the other. With impeccable timing, Lego has released its latest Technics megakit, offering disillusioned truck drivers and wannabes like us the chance to build a Mercedes-Benz Arocs 3245.

An electric motor and Lego's latest Pneumatic 2.0 system take care of the diggery moving parts, while the 54cm truck itself has independently sprung axles, differentials and a six-cylinder engine. With 2793 parts, you'll wish for a few more miles of Operation Stack.

R3050 / lego.com



Chromebook crushers ACER ASPIRE ONE CLOUDBOOK

'Smash' goes the Chromebook as we forget we were even holding it and wander off towards these two new Cloudbooks: 11in/28cm and 14in/35.5cm Windows-10-running laptops. Like Chromebooks, they have pretty modest specs – Intel Celeron processors, 2GB RAM and 1366x768-pixel screen resolutions – but they don't need a lot of power, because most of what they do is cloud-based. With a year's free Office 365 Personal and 1TB of OneDrive cloud storage, they may actually best a Chromebook for work, while proper HDMI and SD ports mean they'll square up for playtime. Starting at just over a kilo, they should be pretty cloudlike on the knees, too.

Rtba / acer.co.za

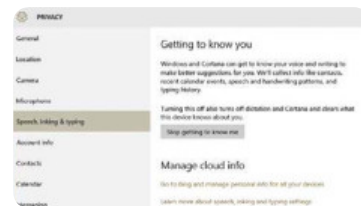
NOW WE ARE 10

THREE THINGS TO DO WITH THE NEW, GROWN-UP WINDOWS



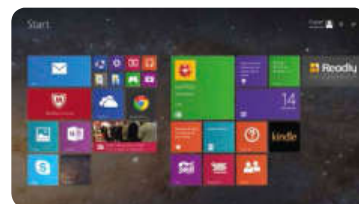
PLAY WITH CORTANA

If you haven't spent any time with Apple's Siri and don't have a Windows Phone then assistant Cortana will be an appealing Win 10 addition. LOL your socks off by asking her things about herself, or about rival companies. Ask her to set a spurious reminder that is far enough away that you'll forget about it. Ask her to tell you a joke. Then turn Cortana off forever.



DELVE INTO PRIVACY

'Microsoft is evil!' is the message coming out of the intertubes since the first previews appeared. And, especially if you hit the 'Use Express Settings' option during installation, it's set up to share your info with Microsoft and developers. Hit up the Privacy tab in settings and turn everything off. And then try not to get frustrated by wildly inappropriate ads.



RESIZE YOUR START SCREEN

This is it, the *grandepungent fromage* of Windows 8 hate, the full-screen Start Menu. It's been minimised down into a Windows 7-style menu, but if you really hate the tiles you can unpin them all. Or make them non-'live' so they stop flipping about. Or – and here's fun for when your colleagues go to the loo – you can make Start Menu full-screen again.

➔ [READ THE REVIEW ON P62](#)

SKATEBOARD DECKS

If you're rubbish at skating, you can always just hang them on your wall

1 Arbor Whiskey Hunter

Made from sustainably sourced bamboo and maple, the bigger deal for us is the cats sleeping on sharks. It's a relaxing, utopian image.

R1150 / surfdome.com

2 5Boro VHS

Going skateboarding is undeniably analogue, like VHS tapes. Unlike VHS tapes, skateboards are not magnetic, because that would definitely be cheating.

R1050 / skatehut.co.uk

3 Santa Cruz Marvel Spider-Man Hand

This Marvel mashup is Santa Cruz celebrating 30 years of its iconic Screaming Hand logo. This is our favourite, but also check out Thor, Venom and Wolverine.

R1500 / santacruzskateboards.com

4 Powell Peralta Mike McGill Skull & Snake

A throwback to when skating was long hair and carving pools, not androgynous outfits and 50ft X-Games quarter-pipe flip tricks. Not that we mind either, mind.

R1700 / powell-peralta.com

5 Almost Seu Trinh Mullen

Rodney Mullen is doing his trademark primo slide on the edge of the board. But wait... what puddle-dwelling creature is taking the photo?

R1050 / surfdome.com



2IN1 A LAPTOP WHEN YOU NEED IT A TABLET WHEN YOU WANT IT

acer

Aspire Switch
10E 2-in-1

R5000 each



• Intel Atom Z3735F Quad Core 1.33Ghz
(90353, 90354, 90355, 90356, 90357, 90358)



Also available in these colours:





Want some more? GOPRO HERO+ LCDX

The universe is more frenzied. Mostly because the rules have never been standardised. Look at this new GoPro. It is undoubtedly 'more' than the entry-level Hero – it adds an LCD screen, superior 1080p/60fps video, Wi-Fi and Bluetooth. You can unscrew the 40m waterproof case and do basic video edits on the touchscreen. But is all this really worth spending more? Who's to say that, within the confines of the PMGM game, this isn't actually less? We can tell you it's more – and let's be clear, it really is – but you have to make the final decision. We can't play for you.

[Rtba / gopro.com](http://Rtba/gopro.com)



Newly arresting design NAD VISO HP30

It's like the office administrator has turned up to a company function dressed to kill, and everyone's racking their brains for conversation entry points. NAD's previous over-ear headphones, the HP50s, were sonically capable but somewhat drab. These new HP30s sit below them in the range, but above the HP20 in-ears, and unashamedly demand attention. If they sound anywhere near as good as they look (they're also available in black or white) then there's going to be renewed interest in this British-born, Danish-influenced, US-owned hi-fi company.

[R3500 / nadelectronics.com](http://R3500/nadelectronics.com)

This is undoubtedly the best-looking pair of NADs we've ever seen



Now improved MOOV NOW

The first Moov device seemed to hit the spot with sports fans, so this new version gets mostly just aesthetic and ergonomic tweaks. It's now smaller and lighter, with a more comfortable (and more stylish) strap. Functionally, its sensor-based multi-sport coaching ability remains: running, swimming, cycling, boxing and cross-training are all covered, with the corresponding smartphone app looking after GPS tracking and voice prompts. A replaceable CR2032 battery lasts up to six months, says Moov, which makes workout excuses all the harder to find.

[S60 \(R800-import\) / moov.cc](http://S60(R800-import)/moov.cc)

"Lengthen your stride!" the Moov's app might shout. And not even buy you an ice cream afterwards.



Mucky funster

HONDA CRF1000L AFRICA TWIN

If you're rich and planning to ride a motorbike around the world, you buy a BMW or a KTM (plus a 4x4 support crew and a helicopter). Seat-of-the-pants bikers, however, generally seek out one of the few remaining Honda XR750 Africa Twins. Made between 1993 and 2003, they are bulletproof legends of the off-road bike community... which is why Honda invoking the name in 2015 is a big deal. This is quite a different animal, with ABS and traction control, and even an optional dual-clutch automatic gearbox. Not many Somalian spanners are going to be able to fix that by the roadside, but it does mean comfort and security for the vast majority, for whom adventure is a wet back road.

Rtba (due 2016) / honda.com



Throw a curve wall

BENQ XR3501

These are halcyon days for gaming immersiveness, but if you can't afford a VR setup then a huge, high-res curved monitor might be the next best thing. This new BenQ is a class-leading 35in/89cm, displaying its 21:9-ratio 2560x1080 pixels in full wide glory. Rivals might offer a higher pixel count – Samsung and LG both have 3440x1440-pixel 34in/86cm curved monitors – but the BenQ's trump card is that it is *more curvy*. The XR3501 has a 2000R curvature to its panel that is better than, say, the 3000R rating of Samsung's flagship S34E790C. Anyway, if your graphics card can run 3440x1440 at any sort of decent frame rate, then we deduce that you can afford a VR headset.

R15 000 (import) / benq.com



? WTF IS THE PUBLIC RADIO?

It looks like a killing jar for insects.

It is, almost. It's a killing jar for your choice of radio station. It is either on, or off.

Well, everything is either on or off.

Maybe for you, Binary Bob. But some people struggle with the concept of everything being delineated. They like nuance, shading, scales. If you were to ask "0 or 1?", they might reply "0.6".

That's not really how binary works.

Shut up about binary already. This is about radio – this radio, which is tuned to one particular station and then sent to you. You can turn it on, or off. In a concession to the lack of a human aural standard, you can adjust the volume. And, with grudging acceptance that FM signals vary due to local conditions, you can extend or retract the aerial. But you can't alter the station. Once the makers program it in, it's hard-wired. Fixed.

So you can't change the station?

Well, yes, actually you can. But it's not easy – you have to unscrew the lid. And it's not proper, more to the point. The idea is that you choose your station and you stick by it. You think "I might listen to the radio" and so you turn it on. Want diversity? Try the internet, muthafishbowl.

What station would you choose, then?

Ah, that's tricky, isn't it? Because we quite like radio, which means that we have a number of favourite stations. Clearly 5fm might be a winning choice, but Talk Radio 702 gets a lot of local airtime too. Which is a problem, because The Public Radio is from the USA, so they don't allow those.

There is an issue.

FM's days are numbered.

This was never going to be a potential family heirloom. It's a statement about overwhelming media choice in the modern age and, if the transmitters ever do come crashing down, it's a lovely little jar. That's why The Public Radio did so well on Kickstarter and why it's currently sold out. But more will come, so start thinking which station you'd choose.

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HI-FI ▶

THE

HIGHEST

PHOTOGRAPHY ◀

ACCESSORIES ▶

FORM

OF

HOME ◀

TRANSPORT ▶

KIT

WHAT'S THE DIFFERENCE BETWEEN A GADGET THAT FEELS LIKE AN EXTENSION OF YOUR BODY AND ONE THAT GETS LEFT IN YOUR KITCHEN DRAWER? THE ANSWER IS NEARLY ALWAYS BRILLIANT DESIGN. SOME THINK THIS JUST MEANS LOOKING PRETTY. BUT AS THESE MASTERPIECES SHOW, THE BEST TECH IS AN INGENUOUS ALCHEMY OF FORM AND FUNCTION...



B & O BEOLAB 19

Who's more important – the designer or engineer? B&O reckons this wireless subwoofer proves that both are equals. Rather than unleash its designers to create sculptures that would give its engineers migraines, it puts both teams together early on to make sure they're following its 'form follows function' principles. So while its dodecahedron shape means it'd look at home at the MoMA, it can also disperse the bass better without colouring the sound.

R50 500 / bang-olufsen.com



GRAMOVOX FLOATING RECORD

"I always felt that watching a record spin is just mesmerising," says Gramovox co-founder Pavan Bapu. So he made sure he'll be forever stuck in vinyl trance by crafting this vertical record player. It's not the first sound spinner to do it (Sony's PS-F5 got records standing up in 1983), but it is especially elegant and user-friendly. It comes with its own cartridge and speakers, which means no fiddling about with a phono preamp.

R5 300 / gramovox.com

DEVIALET PHANTOM

Ah yes, the mysterious, shiny orb trick. Audiophile gear loves to adopt an arcane shape before talking about 'diffraction' and 'audible spectrums'. But the Phantom is a Bluetooth speaker that's capable of producing 105dB of sound from one metre away.

That's the maximum legal loudness for a nightclub, from a speaker that's barely bigger than a bowling ball. How? To produce low frequencies usually only possible on much bigger speakers, the Phantom creates a high internal air pressure equivalent to the acoustic energy of a rocket launch. This ensures that, when fed the hi-res music it craves, the Phantom's side-firing bass drivers flutter dramatically like tiny wings.

Looking like an EVA Pod isn't without its benefits either – this ensures omnidirectional sound that never leaves you 'off axis'. The gadget Mother Hen might just have laid her golden musical egg.

from R28 500 / devialet.com

LISTEN

THE MODERN CLASSIC



INSPIRED BY



WALL-E 2008



EAMES LOUNGE CHAIR 1956

DAVONE RAY-S

Any design that mimics an all-time classic like the Eames lounge chair runs a serious risk of looking like it belongs in Etsy's kitchiest corner. Not these curvaceous, hand-crafted speakers from Denmark, though, which combine beechwood cabinets with elegant steel stands that will perfectly match your carefully crafted mid-century manor (or your Ikea Poang Armchair, at the very least). At only 29in/74cm tall, they're perfect for low-ceilinged city flats too. Just make sure you remember not to slump onto one after a hard day's graft.

R113 000 / davoneaudio.com



UE ROLL

If most hi-fi hails from the 'cat' school of design (elegant, if not exactly playful), the Roll is a bearded collie licking your face with its user-friendly enthusiasm. The Roll's shape ensures that it throws out a 360° field of sound, making it an ideal picnic buddy. A built-in bungee cord and waterproofing (up to 1m) mean it's perfect for shower karaoke too. Add the stain-proof fabric face, and you have a travel companion that's more loveable than a Pomeranian.

R2 050 / ultimateears.com



COPLAND DA 215

For a company that has the word 'listen' splashed across its homepage, Copland is surprisingly keen to please your eyes too. The Danish audiophiles (unrelated to the Stallone film) have been crafting hi-fi since amps were built like tanks and looked like, well, this. The DA 215, a DAC, preamp and headphone amp for polishing digital files played from your PC, has it all: clean lines, weighty knobs, and the mysterious glow of valves incarcerated in a musical prison.

R3 700 / copland.dk

TWO

THE ONLY SPEAKER YOU'LL NEED

EMMANUEL NARDIN
DEVIALET CO-FOUNDER**1 THE SIZE**

"We had to work with a maximum acoustical volume of six litres, which is 20 times less than the volume of other speakers that reach the Phantom's power. The shape is a response to these acoustical challenges."

2 THE SHAPE

"The sphere has always been known as the perfect shape to reproduce sound, so we made sure to give the Phantom an edgeless design. There is absolutely no space left to add anything else inside the Phantom."

3 THE TWEETER

"The design of the Phantom's tweeter was inspired by 'cymatics'. The word comes from the Greek for 'wave' and is a technique that allows soundwaves to affect matter and create some amazing shapes."

THREE



THE CAMERA REINVENTED

ARIEL BRAUNSTEIN CHIEF
PRODUCT OFFICER, LYTRO

**1 BACK TO
BASICS**

"We aimed for a simple and straightforward design. This was intended to distinguish the Illum from conventional DSLRs and make it clearly a piece of technology."

**2 FORWARD
THINKING**

"The camera's signature angle is the logical answer for shooting with a screen viewfinder. It represents a 'duh' moment – not only for light field photography, but for any digital camera."

**3 ALRIGHT
FOR THUMB**

"The Illum was designed so that every setting, mode and variable can be adjusted at the touch of a thumb, all while keeping a finger on the shutter release."

LYTRO ILLUM

You probably think light bounces off things and lands in your camera and makes a picture, but actually it only appears to move; in some weird sense, the light landing on your camera's sensor is there permanently, but it's also never there, and... and... we need a lie down. Okay, that's better. So, while most cameras capture a flat plane of light that just looks as though it has depth, the Illum captures more information — real depth. In this multi-dimensional future, time can be rewritten. Pictures can be refocused after they've been taken. How? That serious-looking cylinder looming out of the Illum's forward-leaning body isn't a lens; it's a container for hundreds of lenses, capturing information from many perspectives and focal lengths, building a huge image that is simultaneously in and out of focus, at the same time. Depending on who's looking at it. Time for another lie down.

R12 200 / lytro.com



DIGITAL BOLEX
D-16

Some designs are so iconic it's best to let their retro goodness shine through. The original 16mm Bolex camera almost single-handedly sparked the rise of indie filmmaking in the '60s; since this digital version arrived in 2012 it's been riding a tidal wave of nostalgic goodwill, and it's easy to see why. It can shoot 2K films at 24fps, is compatible with old C-mount lenses and has that 'pistol grip' for ultra-steady shots.

from R40 000 / digitalbolex.com



LOMO'INSTANT
BOSTON

Not all instant cameras are as well built as a bag of chips. The Boston may be plastic, but it takes the instant into uncharted realms of desirability with its clean lines and bright paint job. In the box are fisheye, portrait and close-up lenses to complement the built-in wide-angle, and there are experimental options galore, including unlimited multiple exposures and flash filters for adding psychedelic spice.

R2 700 / lomography.com

CAPTURE



PANASONIC
LUMIX GM5

If the Leica Q (see right) is a little black dress, the GM5 is a really great pair of sneakers. Not quite as chic, not such a special occasion when you take it out. But actually, the design is so nice that it goes with pretty much everything, and it's affordable enough that you'll take it everywhere. Plus, you can accessorise it with your wardrobe of Micro Four Thirds lenses, making a pocket-size camera as versatile as a DSLR.

Rtba / panasonic.com



PANONO
EXPLORER
EDITION

We've been waiting with cupped hands for this panoramic ball-cam to arrive since it first hit Indiegogo in January 2014. A limited batch of 1000 are finally shipping, and the final design includes 36 fixed-focus cameras, which automatically stitch together photos into a 360° panorama when you throw it in the air — a unique alternative to flying a drone over your Sunday braai.

R22 400 / panono.com

LEICA Q

The word 'luxury' is often mistranslated as 'useless and wasteful': iPhone cases carved out of fossilised dinosaur spleen, car seats stitched from rare marmosets. True luxury is demonstrably better than the things around it, and the Q is a masterpiece of quiet luxury. Simple, well-made dials change the main variables easily and effectively; a small but powerful viewfinder frames your shots; a full-frame sensor and superb optics turn them into beautiful images. You could make one from diamond-carved mammoth tusk, but you couldn't make it any more desirable.

R65 000 / ormsdirect.co.za

THE MODERN CLASSIC



INSPIRED BY



CONTAX G1 1994



LEICA CL 1973

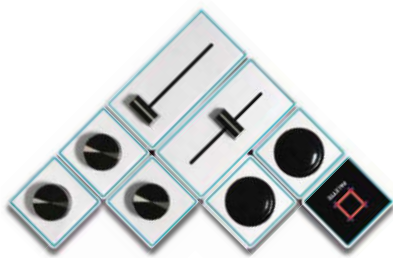


MISFIT FLASH

Wearable tech needs to be actually wearable. Not Google Glass wearable, where everyone who sees you wearing it stares like you've got no trousers on.

You should be able to put it on and forget about it, like you do with your trousers. That's the thinking behind Misfit's Flash, which you can wear on a wristband, clip to a keychain or stuff down your sock and it'll count calories burned, tally up how many steps you take and work out how well you sleep.

R550 / misfit.com



PALETTE

Good design isn't always about rigidly dictating how something should look and function. Not unless you work for Apple, anyway. Palette is a modular system of buttons, dials and sliders, all connected magnetically around a USB brain with an OLED screen. It means you can turn your Photoshop sliders into tactile controls, or the dials in your music production program into real, tweakable knobs. The customisable layout puts you in the designer's seat.

from R2 650 / palettegear.com

APPLE WATCH EDITION

If it's what's inside that counts, in horological terms the Apple Watch is unremarkable. With no movement or 'complications' there's little under the sapphire crystal screen to discuss, but it's what Sir Jony and co have done to marry the old and new that makes this most stylish of wristputers stand out. Apple's first smartwatch keeps the traditional crown but gives it a new job: it now navigates the Watch's globular app cluster, zooming with a twist, and taking you back to the homescreen with a press. Rather than a window on the back to examine the workings, there's a heart-rate sensor, and its Taptic Engine turns vibration alerts into well-mannered taps on your wrist. Attach a rubber sports strap and it's a sleek health tracker; dress it in leather and you might get asked to turn left when you board your next flight. And you wouldn't get that wearing a Pebble, would you?

R163 000 [import] / apple.com

FEEL

THE MODERN CLASSIC



INSPIRED BY



YAMAHA SY-1 1974



YAMAHA YC-10 1969

YAMAHA REFACE YC

The music industry loves a bit of nostalgia, although obviously it's not as good as it used to be. If the option to use something vintage is there, they'll take it. If they catch sight of an opportunity to reform something, they'll do it. Yamaha is no different and the YC is part of its Reface range — a remake of four old synths with new-fashioned bits added. That means the YC will make organ noises straight out of the late '60s, while being equipped with all the necessary outputs to play straight into a PC or hook it up to the accompanying iOS app. R7100 / yamahasynth.com



HEIMPLANET FISTRALL

Normally, if a tent doesn't collapse on your face and keeps your pants dry it's had a successful day tenting, but any serious camper knows the bits before and after that are just as important. Heimplanet threw out the irritating poles that come with most tents, replacing them with inflatable beams. Its first blow-up tent was the sci-fi-looking Cave, but the dual-chamber Fistrall is a more lightweight bundle.

R6 000 / heimplanet.com



CRANK BROTHERS Y16

If something has a lifetime warranty you can be fairly sure it wasn't knocked out in somebody's lunchbreak. That kind of confidence only comes from good design. The Y16 is a clever take on the standard Y tool, with 16 different gadgets built into a pocketable metal frame, including all you need to fix most issues out on the road. It's no coincidence that it looks like a pedal, either; that's how Crank Brothers made its name.

R750 / crankbrothers.com



THE GOLD STANDARD FOR WEARABLES

SIR JONATHAN IVE
CHIEF DESIGN
OFFICER, APPLE

1 HEART OF GOLD

"With Apple Watch Edition we're working with a uniquely luxurious metal: 18ct gold. We're using both yellow and rose gold. Each is a custom alloy designed to be twice as hard as standard gold."

2 APPLE HARDENED

"We use a new hardening process to strengthen a metal that is naturally very soft. The molten gold is cast into solid ingots. These are then precisely milled to remove any imperfections."

3 CROWNING GLORY

"Magnifying content on a small display is important. The Digital Crown is a remarkable input device. It fluidly zooms into apps and, crucially, you can use it without obstructing the display."

HOW DOES IT WORK?

1 FIELD OF DREAMS

Buried in the Riggad's base is a coil of wire called the 'transmitter'. This has an alternating current passed through it, generating an electromagnetic field.

2 LIGHT OF THE CHARGE BRIGADE

Your Qi-compatible phone has another coil. When this is put inside the EM field, a current is induced in the coil, and that power goes into the battery.

3 YOU'RE GETTING WARMER

Wireless charging can cause your phone to heat up a bit. This is normal, but if it gets too warm the wireless charging will stop (it'll also stop when your phone is full).



YOUR SMARTPHONE'S GUIDING LIGHT



IKEA RIGGAD

If Allen keys still give you flashbacks to 'Wardrobeat', fear not. The Riggad is a different Ikea beast – the instructions are just two steps long, and it's part of a range from the Swedish flat-packers that includes wireless charging. That 'plus' sign on the base marks an induction charging point that is compatible with any Qi-certified smartphone, which includes Samsung Galaxy models, Google's Nexus phones, Nokia's Lumias and many others. "I wanted them to blend in easily in the home," its designer David Wahl explains. "The charging pad has a simple yet interesting design that can be used in many places across the home." Ikea also offers a wireless charging bedside table and the option of converting existing furniture using the Jessen wireless charger (R610) and Fixa five-piece hole saw set (R110). If you dare. R1 050 / ikea.com



HYPETEX HALO CHAIR

Formula 1 has given us many techy treats, from traction control to ABS brakes, and now it's inspired this iconic chair. It's made from the world's first coloured carbon fibre, an F1-developed material called Hypetex, and is here to show off Hypetex's potentially bright future with its terrifyingly minimalist design and disc-shaped backrest. Expect to see this chair subtly influence your sports equipment over the years. R204 000 / hypetex.com



NANOLEAF BLOOM

Lightbulbs have stepped out from the cover of glory-hogging lampshades. Following Plumen's lead is this energy-efficient LED bulb, which is dimmable without a dimmer switch. Flick your light switch off and on during the bulb's slow build towards 1200 lumens and you'll lock in that level of brightness. Then stand back and admire your diode-dotted bulb. It'll make your bills look good too, thanks to the use of copper rather than aluminium LED heat sinks. R530 / nanoleaf.me

DWELL



MIITO

Sometimes design is about shearing away unnecessary fluff. Take kettles. Because they all look the same, we'd assumed they had reached design perfection. But Miito has refined the idea into a base plate and rod. You see, traditional kettles waste energy because we always fill them up higher than we need. But the Miito only heats the water in your cup by using an induction base to heat the rod. It's quiet and doesn't get caked in limescale either. Neato. R1 650 / miito.de



NEST

He might not have Jony Ive's status, but industrial designer Fred Bould has been behind some major gadgets over the years, including the Roku 3 and GoPro Hero 3. None are quite as iconic, though, as the Nest Thermostat, which he helped craft with Tony Fadell, iPod creator and Nest's CEO. Its hefty metal dial has an iPod-esque click that we'd play with a lot more if the Nest wasn't so good at adjusting the temperature automatically. R3 680 / store.nest.com

JUNIPER M LAMP

The Humphry Davy mining lamp and the later carbide lamp (whose lime-based chemical reaction was used in theatre spotlights, hence the phrase 'in the limelight') both inspired the design of this wireless, portable and highly versatile LED lamp. Its handle and up-to-60-hour battery life mean it's ideal for roaming around and pretending you're a character from *Great Expectations*. But we'd be more likely to hang this 9in/23cm tall beauty on our shed wall for working on 'projects' (translation: reading lots and lots of comics). R4 100 / juniper-design.com

THE MODERN CLASSIC



INSPIRED BY



CARBIDE LAMP 1910



DAVY LAMP 1815



VW XL1

Take aerodynamic design to its extreme and you usually end up with something crazy and futuristic. The XL1 may, as our review remarked, look a bit like a sci-fi hearse, but its streamlined profile, covered wheels and lack of wing mirrors (it uses cameras) ensure that it's the most fuel-efficient production car in the world. Sadly, VW only made 200, but the German car-maker reckons it's an example of the kind of vehicle we'll all be driving in 15 years.

R2.4 million / volkswagen.com



JOHAMMER J1

It might look like a giant pizza cutter, but there's reason behind the Johammer's design. Its low centre of gravity and unique chassis mean there's room for enough batteries to give it an incredible 200km range. Extra sci-fi points are won for building the dash into the rearview mirrors, and for including regenerative brakes. The 14hp and 120km/h top speed won't raise much hell on the highway, but in town they'll mean more time getting gawked at.

from R342 000 / johammer.com

SPECIALIZED S-WORKS VENGE VIAS D12

Aerodynamic drag is road cycling's nemesis. To beat it, you need a slippery crusader who was born in a wind tunnel. The Venge VIAS is that superhero. Mark Cavendish's sprinting steed is a design marvel that Specialized claims is the fastest bike in the world. As you'd expect, it's packed with aero-obsessed touches. There are no external cables, with brake lines instead routed through the handlebars and frame. The 'Aerofly' handlebars and stem, with their aggressive 'ram horn' look, keep the rider in an aero position, while the frame tubes are specially shaped to cut through the air. All of this creates a sleek eel of a bike that Specialized's wind tunnel tests say is two minutes faster than a standard bike over 40km. For weekend warriors charging around mountain roads, that's a lifetime.

R173 000 / specialized.com

MOVE

THE MODERN CLASSIC



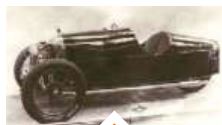
INSPIRED BY



MORGAN THREE WHEELER 2011



AUTO UNION SILVER ARROW 1933



MORGAN THREE WHEELER 1911

MORGAN EV3

Three-wheelers have come a long way from Trotters Independent Traders. In 2011, Morgan re-launched its motorcycle-engine-powered classic and suddenly turned them into desirable weekend runabouts. Now they're getting a futuristic makeover with this electric version. Looking like it's leapt from a post-war cover of *Popular Science*, the EV3 packs enough lithium-ion batteries to take you 242km on a charge and promises to do 0-100 in a more than decent eight seconds. We're polishing our aluminium aviator goggles in anticipation.

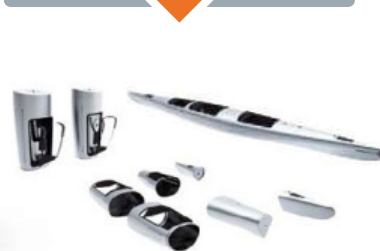
Rtba [due 2016] / morgan-motor.co.uk



QUADROFOIL Q2A ELECTRIC

Jet-skis are old hat, and not just because of their noisy, leaky engines. This twin-seat electric craft has four foils that lift it out of the water for a smooth 'flight' at up to 40km/h. The quiet, emission-free motor also means it's allowed in waters that aren't open to peace-shattering motorboats. Throw in a removable steering wheel that acts as the key, and you have the 21st century update to Roger Moore's Wetbike.

from R225 000 / quadrofoil.com



KLEPPER BACKYAK

We've seen modular kayaks before, but this takes the idea and runs several ultra-marathons with it. In its basic form, the Backyak is a two-seat carbon kayak that breaks down into two 10kg drum-shaped backpacks for you to carry to remote waters. Add various accessories (from R15 000), though, and it transforms into a catamaran, toboggan, floating sun lounger or two separate mini-kayaks. There's even an optional electric motor for a spot of lazy touring.

from R56 600 / backyak.de

ONE

TWO

THE WORLD'S FASTEST ROAD BIKE

CHRIS YU SPECIALIZED
AERO AND RACING R&D LEAD**1 THE COCKPIT**

"We're proud of the Venge's bar and stem, which is its most distinctive feature. By packaging all the cabling internally and developing a new rise handlebar, we've been able to get tremendous performance from the cockpit."

2 THE BRAKES

"Designing aerodynamic brakes isn't necessarily hard, but designing ones that function as well as the best traditional calipers took a lot of effort. The seat tube location reduces both frame flex and aero drag."

3 FRAME/WHEELS

"The frame was designed in tandem with the wheels and components. By designing the tyre-to-wheel interface and the wheel-to-frame system we were able to reduce drag while gaining the handling and comfort benefits of a wider tyre."

THREE



GRAVITY LIGHT 2

"Good design must primarily serve people," IBM's first president Thomas J Watson once mused. And few designs promise to serve more people than this refined version of the not-for-profit GravityLight. Here to help the fifth of the world's population who are still without electricity, it's a safe alternative to the expensive, dangerous practice of using kerosene lamps at home. Using the same working principle (see right) as the original 2013 model, it now incorporates a pulley system to ensure anyone can lift the weight and has new LEDs that double its energy efficiency. A new assembly line in Kenya will see it roll out at some point in 2016. Bravo, chaps.
gravitylight.org



1 2 3

HOW DOES IT WORK?

- 1 The user pulls up the 12kg weight using a pulley. The weight falls gently through a six-foot drop at 1mm per second.
- 2 This movement powers a drive sprocket (a wheel with teeth), which rotates very slowly with high torque.
- 3 A polymer gear train turns this into a high-speed, low-torque output, which drives a DC generator and provides 20 minutes of light.

DESIGN FOR GOOD



ALTAEROS BUOYANT AIRBORNE TURBINE

The 'BAT' promises to bring renewable energy to remote communities. According to Altaeros, winds that are 1000–2000 feet above ground are five to eight times more powerful than those down here – so the helium-filled BAT can produce around twice the energy of an ordinary wind turbine (and look considerably cooler doing so).
altaerosenergies.com



DOTS BRAILLE SMARTWATCH

This Braille smartwatch uses a grid of tiny pins, which rise and fall to help the visually impaired tell the time and read messages. Previous electronic braille readers have been bulky, but the Dot shrinks the tech down for the first time and translates text from apps like Twitter or ebooks. Its creators also want to bring the tech to ATMs. Sounds a lot better than relying on Siri.
Rtba [due December] / fingerson.strikingly.com

DESIGNER SHORTCUTS

DESIGNINDABA.COM

Each year in February South Africa's design community descends on Cape Town for the Design Indaba Conference, but its website is a great source for design inspiration all year round.

OPENDESK.CC

This Ikea-bothering site lets you download furniture designs to build yourself or pick up from a local maker who has offered to laser-cut, 3D-print or build it for you. They let you request alterations too if you ask nicely.

QUIRKY.COM

A crowd-powered gadget incubator, this site lets you take part in the design of products. If you have rendering, drawing or even legal skills to offer, you can take a cut of the revenue by offering your 'influence'.

DESIGN
INDABA



WIN



WIN 1 OF 10 BRAVEN 805's WORTH R2 999 EACH

Packed with powerful HD sound and crystal-clear output, the BRAVEN 805 Wireless Speaker perfectly combines style and sound. BRAVEN 805 far exceeds the standard with mobile device charging and 18 hours of continuous play. Connect your favorite devices with ease via Bluetooth® technology and utilize the built-in mic and speakerphone for hands-free calling. Braven 805 Wireless Bluetooth Speaker is designed to help create a chic ambiance perfect for enhancing a dinner party or a night in. For the ultimate listening experience and double the sound, pair any two BRAVEN 8-series speakers together using TrueWireless Technology. Available at iStore and The Gadget Shop. For more info visit www.above-beyond.co.za

BRAVEN

iStore



* Units available in black and white

HOW TO ENTER

SMS "Braven" to 35975

(SMSs costs R1.50) Free minutes do not apply. Errors billed.

Readers must include their names and surnames, contact number, email address and physical address. Valid from September 21st to October 16th. Terms and Conditions on the Editor's Letter (page 2).

HURRY!
COMPETITION
CLOSES
16 OCT 2015

App:roved

FOR
VIDEO
SLEUTHS

Her Story

Before you sits a creaky old desktop. Ominously, 'MURDER' is in the search field. It returns videos — snippets of interviews with a woman. "You think it's murder? Clearly it's murder," she says in the first, concern etched across her face. Robbed of context, any single video offers little, but each is a tiny window into a fragmented narrative; gradually, a compelling and engaging tale will coalesce in your mind as you theorise, search, and unravel mysteries.

Stuff says ★★★★★

R100 / Win, OS X; R70 / iOS

FOR
SHORTCUT
FANS

Smart Launcher 3

There's something of a kitchen-sink mentality to a lot of Android launchers — they try to do too much, and end up getting in the way. By contrast, Smart Launcher 3 is, well, smart. It automatically organises apps into drawers, accessible via a slide-out panel, and you then get a rotary-dial for regularly needed items, accessible via single or double taps. The pro version adds customisation options, including being able to create your own drawer categories.

Stuff says ★★★★★

from Free / Android

FOR
PHOTO
TWEAKERS

Affinity Photo

Serif's known for cheapo PC image editors, so it's a surprise to see Affinity Photo for OS X, a truly audacious land-grab for Photoshop's turf. This isn't a cut-down tool for novices either — the toolset is rich and powerful, with a carefully considered interface that's often more efficient than its rival's. Most importantly, unless you rely on the interconnected nature of Adobe apps, you'll feel you could switch tomorrow — and at this price, you can afford to.

Stuff says ★★★★★

R700 / OS X

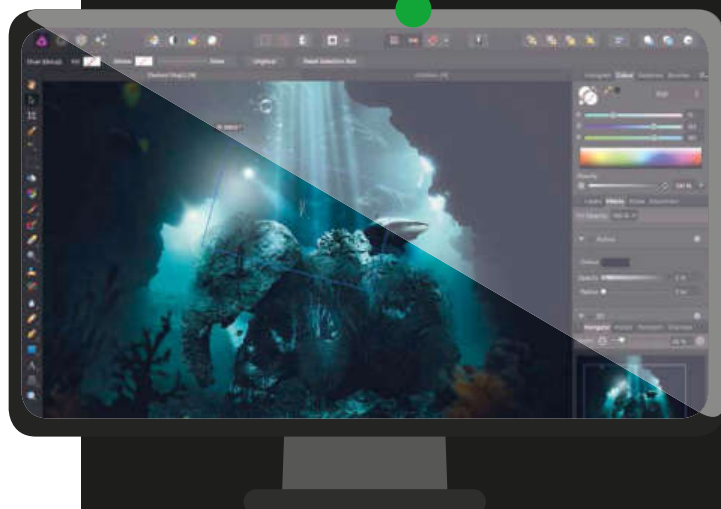
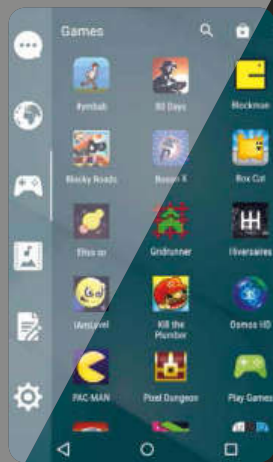
FOR
URSINE
SPELLERS

Alphabear

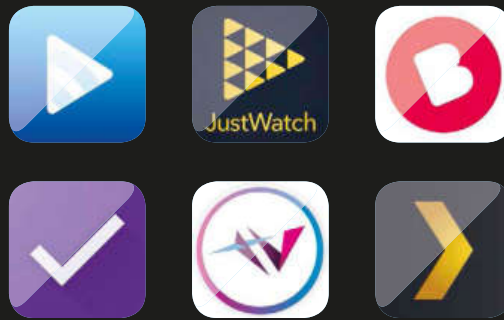
Another word game? Yes, but unlike others, this one has expanding bears! The aim is to tap out words from letters on a grid. Do so and bears fill empty spaces, and then new letters appear around them. Countdown timers that turn letters to rock complicate matters, as do collectable bears that act as power-ups. There's a whiff of IAP but you don't need to pay for a few daily games; or you can spend a few bucks to eradicate those pesky energy timers.

Stuff says ★★★★★

Free / Android, iOS



Mini meme



TV BUDDY APPS

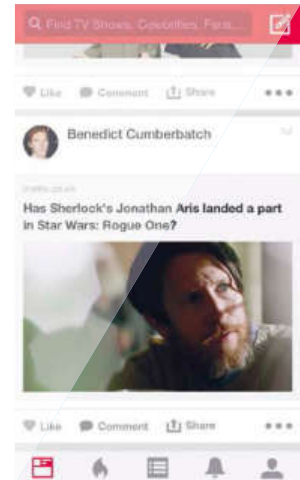
Whether you're watching TV on your tablet, keeping track of your favourite shows or planning your big night in, these apps make sure you're the one in control



● Air Video HD

An excellent alternative to Plex for Apple users, Air Video HD is a superb app for accessing media sitting on your Mac, PC or NAS. It'll live-convert video files so you can watch them on your device, even over the web. If you like, you can then send the resulting stream on to an Apple TV via AirPlay, so you can watch your shows on a real telly.

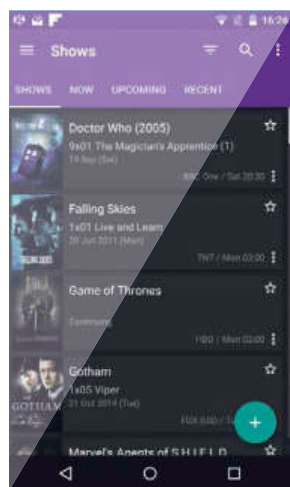
Stuff says ★★★★★
R70 / iOS



● Beamy

Formerly known as Zeebox, Beamy's an oddball — part TV guide, part Twitter wannabe, part TV celeb gossip rag. In all it just about works if you're fuelled by TV and love following the every move of your favourite shows and actors. Be warned, though: it's spoiler-tastic in a way even Twitter would have trouble competing with.

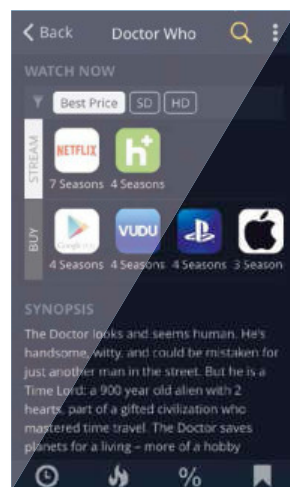
Stuff says ★★★☆☆
Free / Android, iOS



● SeriesGuide

Most TV show trackers try to be too clever, flinging whizz-bang interfaces at your eyes with merry abandon. SeriesGuide, on the other hand, looks comparatively conservative but absolutely nails the basics: it's easy to quickly create a list of shows to track, check what's coming soon, and mark anything you've already seen.

Stuff says ★★★★★
Free / Android



● JustWatch

Navigating modern TV can get a little confusing, in that the things you want to watch can be spread among all manner of streaming and download services. JustWatch makes sense of the mess, helping you find where to watch and buy. Pick a country, select your services, choose some shows and prepare for TV goodness.

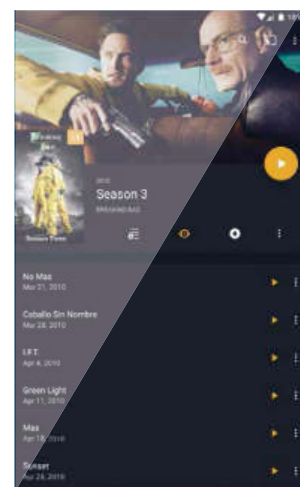
Stuff says ★★★★★
Free / Android, iOS



● TVPlayer

If you fancy watching TV on your tablet rather than on an actual set, TVPlayer is a must. The app is essentially a free-to-air TV guide, but when you tap a show it starts playing over the web. There's info and reminders for upcoming shows, although old programmes using a 4:3 aspect appear in comical stretch-o-vision.

Stuff says ★★★★★
Free / Android, iOS



● Plex

An established service with widespread platform support, Plex is excellent for streaming video and other media to your device from any computer running Plex Media Server. The system helpfully provides rich descriptions and art for your saved shows, and with a premium pass will sync media to devices for offline viewing.

Stuff says ★★★★★
Free / Android, iOS, Win

SERVICES



SERVICES



Can you hear them pumping up the stereo?

Sonos Play:1

Sonos knows a thing or two about making a wireless speaker look good, and the Play:1 is one of its best achievements. It packs premium materials that make it look and feel great and a clean, modern design that will work in any room.

With years in the multiroom market virtually unchallenged, Sonos has had time to refine its system. Setup over Wi-Fi via the app is a doddle, and creating a stereo pair is just a few taps away. And loads of music services are supported.

The Play:1's recent firmware tune-up took it up a notch. It's still rich and detailed, with plenty in the low end, but now delivers a touch more midrange clarity, even at volume. It's well balanced, with a good spread and great stereo.

Ports USB2.0, Ethernet
Format support MP3, WMA, AAC, OGG, Apple Lossless, FLAC, WAV, AIFF
Power button No **Radio presets** No
Dimensions 161x120x120mm
Weight 1.9kg **Colours** White, black

● **Price** R3 400 (each) / audicoonline.co.za

VS

Raumfeld One S

The One S speakers may look a little conservative, but they feel sturdy and well built. They're slightly larger than the Play:1s, but sit horizontally, with a selection of radio preset buttons along the top and a power button on the front.

The app is prone to freezing during setup, and it had issues connecting to a Wi-Fi network that the Sonos didn't. Let's hope a firmware update can fix these issues, as once set up the app is easy to use, if not quite as intuitive as Sonos's.

When everything is running as it should, the sound is good, with particularly detailed vocals, though more bass would be nice. But in stereo the two speakers are regularly out of time, and Spotify doesn't seem to work in stereo at all.

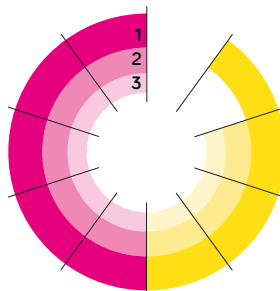
Ports USB2.0, Ethernet
Format support MP3, WMA, AAC, OGG, Apple Lossless, FLAC, WAV
Power button Yes **Radio presets** Yes
Dimensions 130x180x110mm
Weight 1.4kg **Colours** Black/black, white/black

● **Price** R4 100 (each) / raumfeld.com/en

1. DESIGN

2. USABILITY

3. SOUND QUALITY



★★★★★

STUFF SAYS

★★★★☆

The Play:1s look and sound better as a stereo pair, are better-featured and cost less



NEW YORK IN 45 MINS SYDNEY IN 2.4 HRS MARS IN 14 DAYS THE IMPOSSIBLE ENGINE

A British engineer says he can fly you from London to Sydney in under three hours, using a small amount of clean energy. Is the EmDrive about to change the world, or is it the biggest fraud in science? We asked the man behind it.

In 1927, an 20-year-old RAF cadet named Frank Whittle wrote his graduation thesis on the future of flight, proposing an engine that used its exhaust directly for thrust. He claimed the engine would work better on an aeroplane at high altitude, and

made some radical claims about the huge speeds – over 800km/h – such an aircraft could achieve.

The RAF and other establishment bodies were indifferent to the young engineer's outlandish claims; they were the stuff of sci-fi, which had itself only just been invented. Undeterred, Whittle formed his own company and worked on the engine, 16 hours a day, for a decade. It wasn't until 1941, over 13 years after the original paper, that the first jet-powered aircraft took three short hops along a runway in Gloucestershire. Today, at any given time there are more than half a million people in the air. Miles above the ground, moving at hundreds of kilometres per hour, enough people to fill a city eat and sleep, read magazines and watch films, in a craft that was thought to be completely impossible less than a century earlier.

If Roger Shawyer is right, he may be this century's Frank Whittle. Shawyer

claims to have invented an engine that uses no propellant, a closed box that floats into the sky without burning fuel. It is, to all intents and purposes, an antigravity machine.

That's if it works. Where the jet engine had a handful of people who refused to listen, the EmDrive has hundreds of internet pundits who say it violates the fundamental laws of physics.

There's more than one way to gyroscopically levitate a cat

Okay, let's science. And because physics examples often use cats, we'll pretend you're swinging one by the tail. Obviously we do not condone the swinging of cats, but let's pretend you're an inhumane monster with an interest in physics and cat cruelty. As



Does the future of flight come in a can?

you swing, you speed up through one portion of the circle, like you're swinging a slingshot. The faster part of your morally indefensible cat-swing has more centrifugal force than the rest of the swing, and you can feel it pulling your arm in that direction. You have created thrust, without expelling propellant. You are a GIT: a Gyroscopic Inertial Thruster (although given your treatment of the cat, also the other kind). Google 'pendulum car', and you'll see a toy that moves in the same way.

In the winter of 1974, the celebrated engineer Eric Laithwaite gave a lecture to the Royal Institution on just such a device (minus the cat) – a gyroscope that could propel itself, using the thrust generated by its moving mass. Laithwaite was hugely respected, but his gyroscope idea was about as well received as an incontinent walrus in a jacuzzi; so far, it is the only lecture the Royal Institution has ever declined to publish. But while the scientific establishment scoffed outright at Laithwaite's curious idea, researchers in less visible areas – namely military tech – began to look into exactly *why* it was impossible. One of those researchers was Roger Shawyer.

REFLECTOR

If a ball rolling in a tray hits one end harder than the other, the tray will move in that direction. Shawyer says he can do this with EM waves.

JARGON BUSTER

EM WAVES

Ripples in electromagnetic fields move about 20 million times faster than ocean waves. So fast, in fact, that they are subject to...

SPECIAL RELATIVITY

...which is tricky to explain in a tiny box. But basically it means that if you're moving at the speed of light, time stands still...

FRAME OF REFERENCE

...which, says Roger Shawyer, makes each end of the EmDrive a distinct object, or 'frame', which is why the drive moves instead of stretching.

MICROWAVE

An electric box for creating tasty melted-cheese sandwiches and unbearably hot soup, by bombarding them with...

But if the cat swings at the speed of light...

"I was working in the defence industry," Shawyer recalls, "and we were asked to determine if [Laithwaite's] theories were valid. It was a long and controversial proposal, and it was never going to happen – the laws of mechanics don't allow it." But while Shawyer was able to break Laithwaite's machine on the iron-hard laws of mechanics, the laws of electromagnetism proved more elastic. "An electromagnetic wave is moving at the speed of light. When you're working at these very high, relativistic velocities, then suddenly things that appear not to be possible become possible."

If your own research on general and special relativity goes no further than once having owned a poster of Einstein sticking his tongue out, join the club. It's a big club. In 1919, four years after the publication of the Einstein field equations, the world's foremost expert on

relativity admitted that it was probably just he and Einstein who understood the subject. Shawyer concedes: "If you worry too much about what an EM field is, you'll conclude that you don't know. Physicists can describe them mathematically and tell you what they do, but to actually describe them to a non-scientist is almost impossible." Well, that's a big help.

Create an imbalance, and you create motion

Still, here's the EmDrive as we understand it: the engine is a hollow cone with flattened, closed-off ends. Inside the cone, electromagnetic waves are bounced back and forth, from the wide end to the thin end. They're moving at the speed of light, so they can't get any faster, but the tapered shape of the cone means they hit one end with more force (more *group velocity*) than the other. "So inside the cavity itself, you have a momentum imbalance," says Shawyer. "And you



Roger Shawyer

have to say to yourself, what happens to this momentum imbalance? It can't do nothing, maths won't allow it to. So, to balance the momentum, the cavity accelerates in the opposite direction."

Instead of stretching, it moves

The problem is, this effect (if it even exists) is tiny. To turn it into horsepower, we need to talk about Q.

To most people, 'Q' is the gadget man in Bond movies or a potentially disastrous Scrabble tile. To engineers, 'Q' is the 'quality factor' that describes how easily a system loses energy. Engineers who build skyscrapers make sure they have a low Q – below 1 – as the system needs to be able to lose energy (like wind or earthquakes) easily, and not resonate itself to bits. A pendulum, on the other hand, has a high Q, because it re-uses energy added to its system by resonating. Cycling the energy, it loses a little at a time. A good pendulum might have a Q of 10,000.

"Now, in an EmDrive cavity, you have an extraordinarily high Q", explains Shawyer. "Typically, for our basic first-generation cavity, you have a Q of, say, 50,000. This means that these EmDrive cavities store huge amounts of energy: the energy stored in it is 50,000 times the amount that you add in one cycle. So, if you take an EmDrive cavity that has a Q factor of 50,000, and you put in one kilowatt of power inside that cavity, you are storing an instantaneous power of five megawatts. That's a small power station. So, you treat these things with respect."

Shawyer says the sheer power of these high-Q cavities is a problem for some scientists. "If you go to CERN, they have microwave cavities similar to EmDrive cavities, but they're superconducting. Their Q factors are not 50,000 but five *billion*. If you put a pulse of power into these cavities, the forces involved are so huge that these very large cylinders, made from thick, solid metal, stretch. The forces inside are the same as EmDrive forces. They're being stretched by the force of the electromagnetic waves bouncing up and down inside them.

"But because they're symmetrical cavities, the forces are equal at either end and so they don't move, they simply stretch. An EmDrive is a non-symmetrical cavity, and the unequal forces it produces provide acceleration. Instead of stretching, it moves."

"It'll never work," said the internet

Opinion over whether the EmDrive works is divided into three camps: Yes, No and I Honestly Have No Idea (we're in camp three). The No camp's most

Spacecraft with EmDrives could be a lot cheaper and a lot faster



HOW THE EMDRIVE WORKS [IN THEORY]

HIGH-Q CAVITY

A wine glass that 'sings' when you rub it is a system resonating added energy. Multiply that by a few hundred thousand...

MAGNETRON

As components go, 'magnetron' is the one with the coolest name. It's the source of microwave radiation.

Microwaves

consistent claim is that Shawyer's engine violates the law of conservation of energy. That's not simply doing 80 in a 60 zone. That's impossible.

While the majority of those writing articles about the EmDrive are keyboard warriors without physics degrees (a crime of which the author of this article is also guilty), there are plenty of well-qualified detractors, including professors, authors and NASA engineers. They say that, if an EmDrive is a reversible electrical machine that turns power into acceleration – like an electric motor – you should be able to run it backwards and turn acceleration into electricity. With everything on Earth getting acceleration from the planet's gravity, they say this should mean an unplugged EmDrive acts as an effectively endless free power generator. Which, given that the world's energy problems still exist, it obviously doesn't.

"It sure looks like it works," said others

The thing that's really getting the No camp worked up is, people keep building EmDrives and getting results that look a lot like thrust. Shawyer's own tests were backed up by a team from China's Northwestern Polytechnical University in 2008, and in 2011, engineers at NASA's Eagleworks facility – a highly specialised lab built to test things that are So Crazy They Just Might Work – revealed they were testing an engine that operated on the same principle. Earlier this year, they too announced that they'd recorded thrust from their drive, and shortly afterwards a team from the Dresden University of Technology announced that they, too, had built an EmDrive (using a microwave oven) that appeared to work.

What's more, amateur scientists are beginning to experiment in their garages and kitchens – watch out for those megawatts, guys – and they too say their home-made EmDrives are pushing. At the moment the push is fractions of a gramme, but it's a repeatable result.

So, what time does my flying car arrive?

If – and it is an 'if' the size of a morbidly obese whale – the EmDrive works, there is still a lot to be done before your silent, emissions-free plane takes off.

At the top of Shawyer's wishlist is "a high-temperature superconducting material". By making a superconducting EmDrive, Shawyer says he can increase the Q factor from 50,000 to 5bn, as the scientists at CERN did: "The thrust you can get out of it is proportional to the Q of the cavity, so you multiply the thrust by 100,000 times." This takes the power of the engine from a barely feather-raising 300mNs per kilowatt to "about three tonnes per kilowatt". That's your flying car, powered by a fairly decent microwave oven.

"We're currently using a material called YBCO – yttrium barium copper oxide – which is highly superconducting at liquid hydrogen temperatures [-253°C]. That also means that the liquid hydrogen used to cool the cavity can be used to generate the electricity in a fuel cell. So the only fuel you'd put into a personal air vehicle would be liquid hydrogen." Oh. So... he really does see us in the flying vehicles sci-fi promised?

"Yes. You won't be driving around in traffic jams any more; in 20 years' time you'll be using personal vehicles with vertical take-off and landing. Timescales are subject to politics

and commercial interests, but... we will almost certainly be flying *something* within a couple of years."

"This is what I mean," adds Shawyer with the air of someone who has said this to many disbelieving people, many times before, "when I say the world doesn't know what's going to hit it."

"Most of the modern world isn't understood by most of the people living in it"

A true working EmDrive could power a new age of cleaner, faster transport, dramatically altering the way things are shipped and where people work. It could send craft further and faster into space than ever before; most estimates for a trip to Mars are six to nine months (it's a *really* long way), but an EmDrive craft could accelerate for most of the journey, dramatically increasing the achievable speed. You could be on Mars in two weeks. But would any aviation company take a punt on such a device?

"Put it like this," says Shawyer. "In 2009, under government instructions from the UK and under a government export licence called a TAA, all the design info for a flight EmDrive was transferred to Boeing. I'm allowed to say that, it's in the public domain; but five years ago, Boeing had a flight thruster design. At around the same time, China announced that they had an EmDrive with enough thrust to keep the International Space Station aloft. This is happening – it's not something that might possibly happen in the future, it is happening now."

Believe him or not, it's fun to imagine he's right **S**

INCREDIBLE UTILITY OUTSIDER DEVICES

In patent law, *Incredible Utility* describes something that can't be patented because it's too good to be true. In other words, in order to get a patent for something, the guy in the patent office has to believe that its useful function actually exists. Inventions rejected (and in all probability, rightly so) on the grounds of Incredible Utility include a perpetual motion machine, a cold fusion process and a method for changing the way foods taste using a magnetic field. If that last one could lead to a Baconana, we'll need more scientists working on it.



STARLITE

A synthetic material invented by amateur chemist Maurice Ward appears to be capable of withstanding more heat than any other known material – one test involved a laser beam that could vaporise tungsten. Ward died in 2011, though, and it looks as if he may have taken the secret of Starlite with him.



THE E-CAT

Italian inventor Andrea Rossi claims his 'Energy Catalyser' is a low-energy nuclear reactor that turns nickel into copper, producing heat as it does. As with all 'cold fusion' claims, the promise of abundant clean energy sounds amazing but the reality doesn't hold up to scientific investigation.



THE WEB OF POWER

Imagine a system of balloons, similar to Google's Project Loon, which distributed not just wireless internet but wireless electricity across the planet. This was the vision of 19th century sparkmaster Nikola Tesla, who claimed to be able to power hundreds of lightbulbs from miles away.

Inspector gadgets

Keeping a suspicious eye on your house and belongings is now easy and affordable, but which of the latest home-friendly security cameras really puts the smart in smartcam?



Be app-alled
Ever dreamed of watching your house being burgled from your wrist? Hooray for you, there's an Apple Watch app!

BEST FOR...
RUGRATS

Withings Home R3000 / lwarehouse.co.za

What's the story?

It might look like a tealight holder but the Home is rather fancy, with a 5MP wide-angle camera, 12x zoom with auto-enhancement and infrared night vision. Playback is seriously good fun with the 24hr timelapse option, like watching your life in fast-forward, and it's packed with baby-monitor features including lullabies and

nightlight modes – you hardly have to do any parenting at all. It also monitors indoor air pollution. Apparently we should all be looking out for volatile organic compounds. Who knew?

Any good?

It's stylish, subtle and inoffensive, rather like Ikea furniture. The HD image quality is impressive,

especially in low light, while the wide-angle gives sweeping views across any room. 'Events' are collated in a Home Diary that's strangely addictive, but you only get two days' cloud storage as standard and adding more costs quite a lot. Setup takes seconds and the multi-coloured LED is a welcome touch, especially as a nightlight; but while this is a very

neat baby monitor, others here are better security cameras.

TECH SPECS

Dimensions 75x75x87mm

Sensors Motion, sound, VOC

Camera 5MP **Recording time**

2 days (free), 7 days (R160/month),

30 days (R400/month) **Video** Full

HD 1920x1080p **Field of view** 130°

STUFF SAYS A brilliant baby monitor but it does stumble at basic home security ★★★★★



BEST FOR...
PRIVACY

All wired up

The Myfox comes with a whopping 3m USB cable, so you're not completely hamstrung by the location of your plug sockets

Myfox Security Cam **R4 000** / getmyfox.com

What's the story?

With its un-menacing hockey puck design, the Myfox is pitched at those of us who require security but don't want to feel spied upon in our own homes. It comes with a motorised shutter that closes the lens with a tap on the app. Much like Withings Home, the app displays key motion/noise events, allowing you to scroll quickly through the day's events or back through the calendar. The camera is fine on its own but can also be synced to the Myfox Home Alarm (R5 000), which has window and door sensors, key fob access and a siren.

Any good?

The ability to show you're not snooping on your kids, guests or cleaner is a nice

feature. Image quality is excellent, coping well with bright light and shade during the day and virtual darkness at night. The app (iOS, Android) is fresh and uncluttered but navigation wasn't instantly obvious – working out how to set alerts took ages, but was embarrassingly simple once we knew. The lack of free recording is a bigger issue, and it feels as if the system is geared towards those also investing in the Home Alarm system, not just the camera.

TECH SPECS

Dimensions 43x90x90mm
Sensors Motion, sound, night vision
Recording time 1 day (R80/month), 7 days (R160/month)
Video 1080x720p **FOV** 130°

STUFF SAYS Great image quality and tricks, but needs the alarm to shine ★★★★★☆



'Welcome home, Jennifer'

Yep, that bit from *Back To The Future II* is now real, sort of: instead of your home audibly greeting you, the Welcome sends a text

BEST FOR...
PARENTS WITH TEENS

Netatmo Welcome **Rtba (import)** / netatmo.com

What's the story?

Netatmo has added face recognition capability to its smartcam, so as well as motion and sound it'll tell you precisely when your kids get home from school and send you a video clip to prove it. More importantly, from a security (and fidelity?) point of view, it also detects any unknown faces in the house, capturing evidence of the burglar/daughter's boyfriend/courier etc. Controlled via the free app (Android, iOS), there are no subscription fees and all images are stored on the supplied 8GB MicroSD card instead of in the cloud.

Any good?

Welcome works reliably well once it knows a face, but you do have to tell it

a fair few times who's who before it recognises people consistently – and successful detection is considerably reduced in low light, so positioning is key. All the usual motion and noise detection is controllable, and we like the way profiles can be adjusted – so once someone is home you don't have to be alerted every time they go to the kitchen – and there's an Empty Home button that heightens sensitivity once everyone's out.

TECH SPECS

Dimensions 45x45x155mm
Sensors Motion, sound, night vision
Camera 4MP
Recording time 1hr Full HD (8GB, expandable to 32GB)
Video 1920x1080p **FOV** 130°

STUFF SAYS For slick, reliable and informative snooping, get Welcome ★★★★★

Nest Cam R3 300 (import) / nest.com

What's the story?

Dropcam now carries the Nest name so it's no surprise that its latest security camera works seamlessly alongside the family thermostat and smoke detectors. Set your thermostat to Away and the camera will switch on; burn a crumpet and the results will be captured in glorious Full HD. Even as a standalone smartcam it can record all sound and motion – with sensitivity and accuracy enhanced if you subscribe to Nest Aware for R165 a month.

Any good?

Picture quality is superb, the wide-angle lens captures all the action as effectively as anything on test and the ability to zoom in and record is a nice touch,

but the Nest stands out thanks to the brilliance of the magnetic mounting and multi-directional head. The only downside is that, while you get plenty of recording for free, actual sensor quality is held back until you subscribe to Nest Aware, which unlocks better depth perception, improved night vision, greater sensitivity to changes in light and better noise detection. It's a bit like buying a Ferrari and having to pay monthly to go over 60km/h.

TECH SPECS

Dimensions 73x114x73mm
Sensors Motion, sound, night vision **Camera** 3MP
Recording time 7 days (free), 30 days (R165/month)
Video 1920x1080p **FOV** 130°



The Voice

The speaker allows you to talk to whoever is in your house – scare a burglar, get the dog off the couch or (more likely) annoy your nearest and dearest

BEST FOR...
SCARING PEOPLE

STUFF SAYS Exceptional, plays well with others but does have hidden costs ★★★★★☆

Netgear Arlo R4 100 / macnificent.co.za

What's the story?

What's almost as nasty as burglars? Yep, wires, which is why Netgear gets immediate applause for making its Arlo cameras totally wireless, with a battery life of six months. They operate between temperatures of -9 and 50°C, so they can be left outdoors in any weather. For R4 100 you get one cam bundled with a hub that connects to your Wi-Fi router, but the system is expandable up to 15 cameras, four of which can be viewed live at the same time via the free app (Android, iOS).

Any good?

The wirelessness combines with an ingenious magnetic mounting system to make camera positioning simple,

even at acute angles. Range is superb, so you can cover all 20 rooms and the rolling gardens of your palatial home, and video quality (especially night vision) is excellent. As well as watching live you can download an MP4 when alerted via email, or access the last week of footage from the cloud. It lacks noise detection and baby features, but mount one at the front door and one at the back and your house is as safe as, erm, houses.

TECH SPECS

Dimensions 71x41x63.5mm
Sensors Motion, IR night vision **Recording time** 7 days (free), 30 days (R140/month)
Video 1080x720p **FOV** 130°



BEST FOR...
OUTDOOR USE

Game face

If you ask us the Arlo cameras look rather like *Portal*'s robotic matriarch GLaDOS, which is both brilliant and scary at the same time

STUFF SAYS Being tough and wireless makes Arlo both smart and simple ★★★★★☆

Windows, cleaner

What do you do when the world hates your last OS? You create a bloody good one, that's what. It's also the reason 10 is the least 'Microsoft' product ever...

Free / microsoft.com

For the best part of a year, 10 has been evolving in a floodlit petri dish. For once, this was Microsoft without secrets, gnarly sales bluster or baseless boasting. Instead, 10's development has been marked by an even-handed, quietly confident humility.

You can almost hear Microsoft apologising for Windows 8. The company knows that Windows 10 must be right. And now, the large chunk of the world that didn't take part in the Technical Preview gets to find out if Microsoft has succeeded. You've probably seen the teaser ads – like the Preview, they're free of hard sell, instead talking about the new operating system's actual capabilities.

We've lived with Windows 10 from its earliest Preview days. We've killed a few laptops with it, been daft enough to use it for actual work (that didn't go well...) and tried just about every iteration of every Microsoft app along the way. So now that the big launch has finally come, is Windows 10 worth the wait?



1 Quicker and slicker

Everything from searching via the Start Menu to multi-desktop switching is instantaneous, with absolutely no lag from any part of the interface. Things happen as soon as you click, tap or swipe, though there are a few apps that could do with some optimisation.

2 "Initiate Minesweeper"

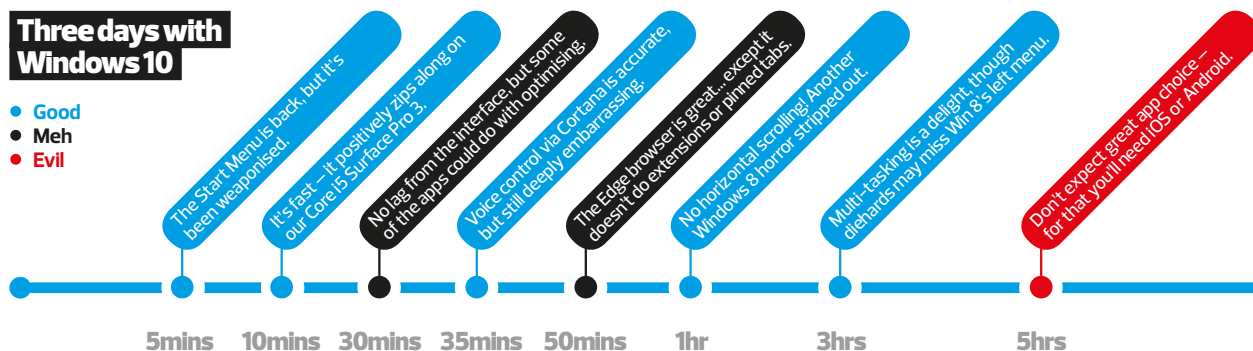
If you're happy to push through the embarrassment, Cortana is reassuringly accurate. Queries are returned in the Cortana assistant pop-up (especially pre-set cards such as weather or time), or shown as a Bing-powered search results in the new Edge browser.

3 Lost Explorer

The good news? Edge is great. It's fast, it seems to work with just about every site under the sun, and it has new features that bring it much closer to competing with Chrome and Safari. Microsoft promises that extensions are coming before the year's end.

Three days with Windows 10

- Good
- Meh
- Evil





4 Tablet mode tune-up

Win 10 on a Surface Pro 3 in tablet guise is excellent, largely thanks to the death of horizontal scrolling. It drove us mad in Win 8 – it's a really inefficient way to present things. So it's a relief to find that Win 10 returns to conventional up-and-down scrolling.

5 All action

You can call up notifications in the new Action Center by swiping in from the right, giving easy access to quick settings (aeroplane mode, rotation lock etc). Curiously, you can't swipe it away from the left – you either have to swipe again from the right or tap the desktop.

System requirements

Existing OS Windows 7 SP1 or Windows 8.1 Update

Processor 1GHz

RAM 1GB for 32-bit version, 2GB for 64-bit

Hard disk space 16GB for 32-bit, 20GB for 64-bit

Graphics card DirectX 9 or later with WDDM 1.0 driver

Special apps

The Windows app store may lag behind, but Microsoft has turned its own apps into a handy suite of free tools



■ Mail and Calendar

The revamped pairing for Win 10 is powerful enough to live with every day, and as usable on the desktop as they are on a tablet. And they work out of the box with Google Apps, along with Office365.



■ Photos

The new Photos app is fast, nicely designed and very capable. It does a great job of enhancing your mediocre photos (even straightening wonky ones) but doesn't have a wealth of filters to play with.



■ News

The all-new app may not give the likes of Feedly or NextGen a bruising – it offers almost nothing by way of customisations – but we can imagine a lot of people not needing any of that.



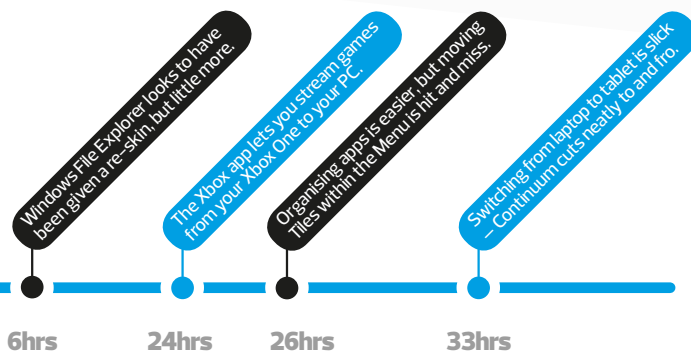
■ Maps

This app gives Google Maps a respectable sparring partner. Offline maps are handy for travel, and 3D Cities lets you explore tourist hotspots, along with a handful of 360° 'Streetside Views'.

You'd be a fool not to upgrade: 10 is a huge improvement on 7, and easier to use than 8. Its clever tricks should worry Apple: Cortana has beaten Siri to desktop, Continuum solves the problem of working on multiple devices, and the Xbox app will delight One owners. Could it tempt Mac loyalists to climb the fence? Maybe.

STUFF SAYS ★★★★★

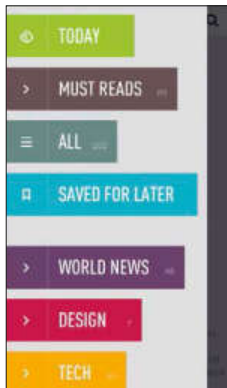
Slick, simple and innovative to boot, Windows 10 is Microsoft's best new OS in ages



THE THRIFTY FIFTY

You want to fill your phone with fabulous functionality and fun, but you don't want to pay a cent for it? The nerve! Allow *Stuff* to guide you through the finest free mobile and tablet apps available today

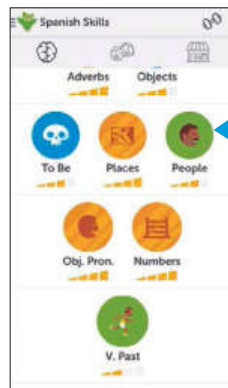
FREE
APPS!



Feedly

iPhone, iPad, Android

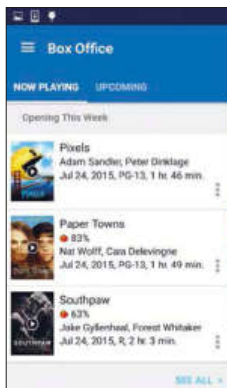
After the demise of Google Reader, the world needed an alternative – and Feedly fits the bill nicely. It does everything you'd want from an RSS reader, presenting the latest stories from your favourite media outlets and blogs in an easily browsable list. You'll find every site you might be interested in – yes, *Stuff* is there – plus it integrates neatly with the likes of Instapaper and Evernote, and sharing stories to social media is but a matter of a click.



Duolingo: Learn Languages Free

iPhone, iPad, Android, Windows Phone

Google Translate is fine for ordering *dos cervezas* when you're away for the weekend but not if you're planning to go native. Duolingo turns learning a language into something akin to a pub quiz machine where the topics are Spanish, French, German, Portuguese and Italian. 'Play' regularly and you should be able to pick up enough to not be a typical SA embarrassment.



Movies By Flixster

iPhone, iPad, Android

It's a bit too 'tomayto' when it could be more 'tomahto' but, US leanings aside, Movies By Flixster comes into its own when you tell it where you live (hint: not America). Pick a film, tap 'Showtimes' and it'll show you where and when that movie's playing locally. You can add the Nu Metro down the road as a favourite cinema, and use the listings to watch trailers and read reviews from Rotten Tomatoes to help you decide what to go and see.



Moves

iOS, Android

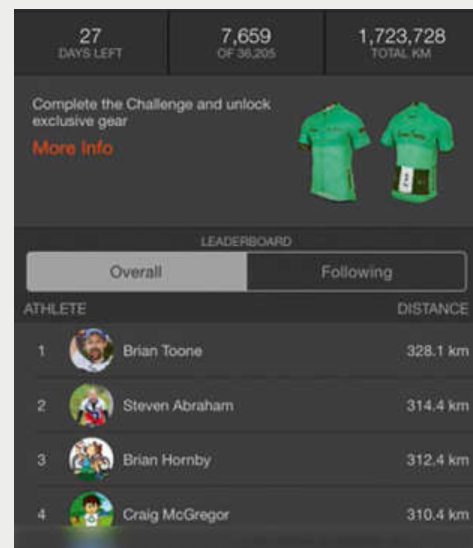
If you'd rather not strap into a fitness tracker, this is a decent phone-based option. It tracks steps – using your phone's motion sensors, which are pretty much the same as the ones in a fitness band – and can tell the difference between walking and running (and also knows when you hop on a bike). Then you can spend that R1500-odd you've saved on fancy running shoes and a heroic dose of energy drink. You're going to need them.

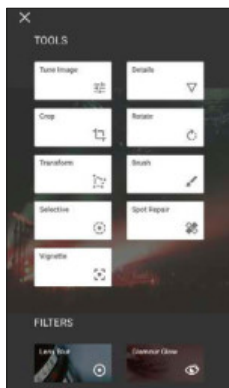
SO GOOD
I'D PAY
FOR IT...

STRAVA
iOS, Android



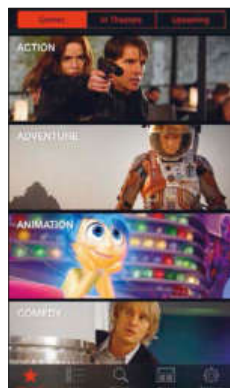
We're pretty cynical about any app that attempts to 'gamify' our life. Become mayor of your supermarket! No thanks. Activate your fruit power-up! Maybe, if we hadn't left primary school 23 years ago. Strava is brilliant because it taps the Fantasy League part of the adult brain. With just two button presses (start and stop) it breaks down your bike ride or run into segments, then puts you on a leaderboard against anyone who's ever sweated through the same routes. No points, badges or boss battles – just lovely stats, maps and, okay, the odd 'King of the Mountains' trophy. Strava is too good for shortcuts or in-app nonsense. It follows the ludicrous policy of offering a brilliant Premium version (from R100/month) that in no way inhibits your enjoyment of the still-unbelievably-free version.





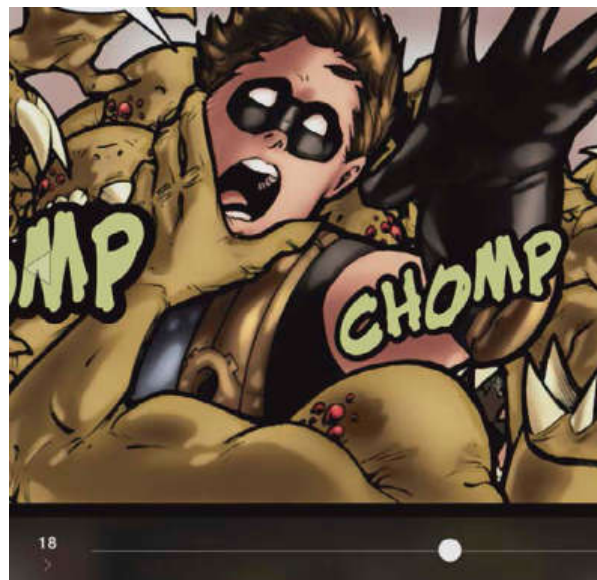
Snapseed iPhone, iPad, Android

Most smartphone snappers don't have time to touch up every pic before loosing it into the interweb. Snapseed makes post-production a job that's done quicker than you can say "cheeeeeeeese". Choose an adjustment — such as 'black & white' or 'tilt-shift' — and you're provided with a gestural interface for making changes. Dragging defines focal points and the strength of effects, ensuring it's easier than falling off a buttered log.



Todomovies 4 iPhone, iPad

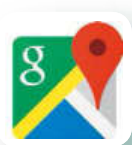
Sometimes it's difficult to keep track of which *Fast & Furious* films you haven't seen. Was *2 Fast, Not Quite Furious* Enough the last one you watched? Or was it *That's Fast Enough Thanks: You're Making Me Furious*? Todomovies 4 helps you do just that. You can browse what's out now or search a huge database of older titles (with trailers), adding them to a watchlist and ticking off those you've already seen with an extra tap.



Chunky Comic Reader iPad

The comic-reader corner of the App Store is busier than the bank on Free Money Friday, but Chunky stands out from its fee-free brethren. It allows you to adjust aspects of panning, page turns and rendering, but the smart part is the upscaling; this ensures comics in Chunky look stunning, even if the source material isn't of the highest quality. Its organisational chops are a touch basic for large collections, but otherwise this is a first-class freebie.

HOW TO... BE A GOOGLE MAPS NINJA



1 Go offline
So you're in a foreign country with no data and no idea how to get anywhere. Sniff out some Wi-Fi, search for the place you need to get to, tap the bottom bar and hit the three dots in the corner. Choose 'Save Offline Map' and, as long as you're signed in, you can cache a portion of the map in Your Places for when using data would bankrupt you.

2 Thumb-derstruck
Say you're holding an unusually large sandwich or fighting off a bear with one hand, and can't spare the index finger needed on your other hand to pinch to zoom without risking a dropped phone. Use your thumb to double-tap and hold on the spot you want a closer look at, then drag it up and down to zoom in and out.

3 Be vague
Just because you don't have a specific destination in mind doesn't mean Google Maps can't be of use. Search for the type of place you're looking for ('Cheapass restaurant', for example) and it should bring back all the branches of McDonald's in the vicinity, complete with reviews so you can quickly pick the one that sounds best.

4 Touchscreen tourism
Want to feel like you're on holiday but can't afford to actually go anywhere? Search for an address, tap your way into Street View mode, turn your phone sideways and hit the double arrow icon in the bottom right corner to switch on motion control. Hold it in front of your face for a bargain basement travel experience.



Computicket iPhone, Android

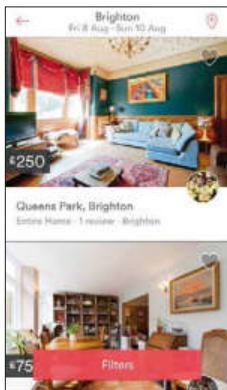
If you're booking tickets for that once-in-a-lifetime event, odds are you're going to be using Computicket. There's no need to head for your desktop browser when you hear that surprise announcement any more, you can just whip out your smartphone and calmly purchase your front-row seats while everyone else is queueing like loons. That's assuming the app doesn't crash, of course, which it's been known to do.



AmpliTube Free

iPhone, iPad, Android

Guitar Hero might be staging a comeback this year but, for those who prefer real strings to plastic buttons, AmpliTube is the Jimi Hendrix of virtual amp systems – although you won't have to worry about it setting your guitar on fire. The free version is really a demo – you have to pay to unlock new stuff – but it's still worth downloading for its built-in tuner and selection of basic setups (mostly based around delay pedals).



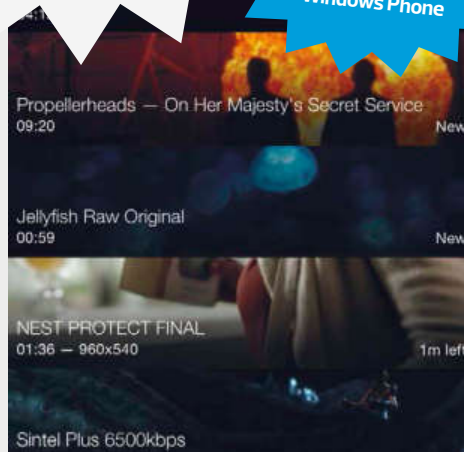
Airbnb

iPhone, iPad, Android

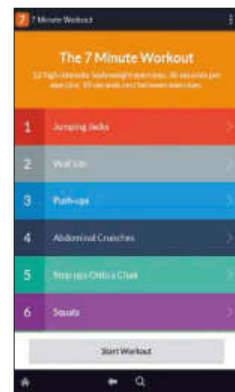
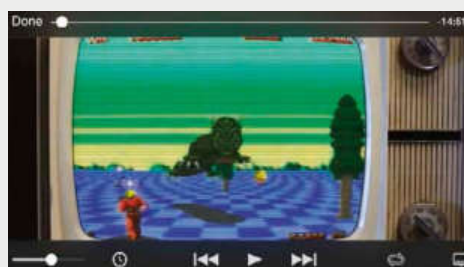
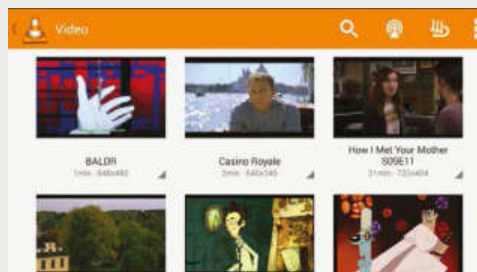
Hotels are great for ordering a pizza to your room at 3am but they rarely give you a real taste of what it's like to live in a town. Airbnb is one of the stars of the so-called shareconomy, a network built around normal people offering up their unused rooms (or whole properties) for a bit of extra cash. The result? You'll be able to find somewhere to stay in the heart of the city, up a mountain or even up a tree, often for a very decent price.

SO GOOD
I'D PAY
FOR IT...

VLC
iOS, Android,
Windows Phone



There are many nice words you could use to describe the iOS experience, but 'freedom' and 'openness' are not two of them. VLC makes both possible, at least when it comes to media playback. This fiercely independent, open-source app will play just about every format you can think of, including Blu-ray and DVD rips, MKVs, lossless FLACs and much more. What makes it all the more liberating, though, is how they can be streamed from your computer, downloaded from the web or saved to your phone or tablet from your chosen cloud storage service. We downloaded some sample DivX MKVs and high-res FLACs (which play well, although in a downsampled form) from the web, only managing to flummox it with a Direct Stream Digital .dsf file... but what's one of them anyway?



7 Minute Workout

iOS, Android

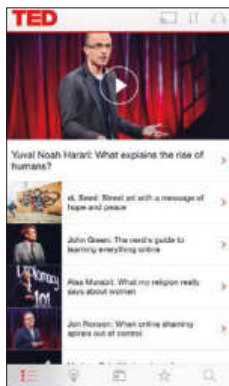
It turns out you can do quite a lot in seven minutes. Make some coffee, sing the whole of *Hey Jude* by The Beatles (minus the final 11 seconds) or do one of Wahoo's 7-minute workouts, which work with Healthkit on iOS and Google Fit on Android. They're based on high-intensity circuit training, so whether you're after overall fitness or a stomach that looks like six bread rolls in a plastic bag and you don't fancy spending any money, this is worth a look.



Documents 5

iPhone, iPad

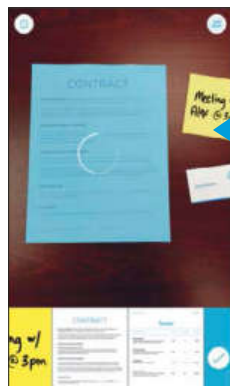
Android fans have long taunted iPhone users over the file-based straitjacket their OS puts them in – and by now even the most ardent Apple fan would admit it's baffling. While iOS now has a document picker, it only works from inside apps, making this app something of a Trojan horse. It enables you to get at all of your iCloud docs, plus any stored in third-party services such as Dropbox, from one place; and it'll also preview PDF, text and image files.



TED

iPhone, iPad, Android, Windows Phone

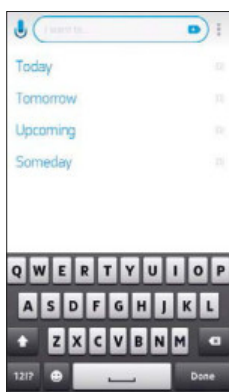
If you're worried about losing it through lack of using it, use the TED app to give your grey matter a regular workout with talks from extremely clever brain instructors, which you can stream or download to view offline. We're particularly keen on the Inspire Me section, which allows you to define the type of video you want to watch and the time you've got spare. The app will then do its best to find something to fit.



Evernote Scannable

iPhone, iPad

If anyone tells you we live in a paperless age, introduce them to the grieving families of all those slaughtered trees. Then, console the trees by showing them Scannable, which uses your iThing's camera to scan business cards, notes and receipts straight to Evernote. Yes, you're scanning dead trees, but it's about changing habits. Androiders and Windows Phoners try CamScanner, which does much the same.



Any.do

iPhone, iPad, Android

If 'find a decent to-do list app' is top of your to-do list, download Any.do and you can cross it off right now. It helps you keep on top of all those loose ends thanks to its cloud syncing and sharing skills, meaning you can delegate the tedious stuff to the kids. If you're on Android you can have it running as a live widget, but no matter what platform you're on it should ultimately save a whole rainforest of Post-it notes.



Flipboard

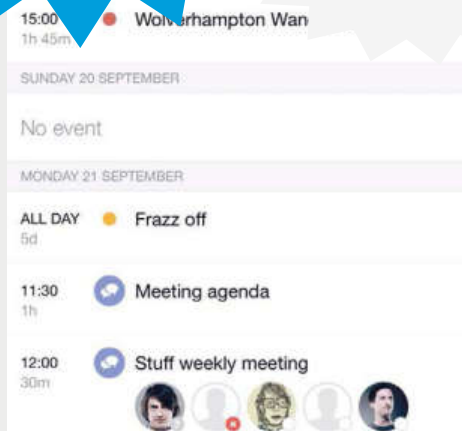
iOS, Android

The death of magazines has been greatly exaggerated. How do we know? Well, for one, you're holding one right now; and secondly, Flipboard turns your social media feeds into a constantly updating digital mag with full-screen pictures and page-turning navigation. How's that for an inspiration? You can also add RSS feeds (may we suggest a site called Stuff.co.za?) to tweak it to your tastes, but obviously it's not as good as the real thing.

SO GOOD
I'D PAY
FOR IT...

SUNRISE

iOS, Android



Without a calendar app, we'd forget our own birthday. Fortunately, some of us have a twin sister who'd probably remind us of it, but for everyone else there's Sunrise (and a well-honed set of excuses). We've tried a few calendar apps over the years – we dabbled with Apple's iOS effort, we gave Google's a go, and we even paid for Fantastical, but Sunrise is king. It works on mobile, on tablet and in a web browser, integrates with our Google accounts, Songkick schedule and Facebook events, plus there are loads of more niche public calendars you can subscribe to. Want to know VK Partizan's fixtures in the Adriatic waterpolo league, or when *Storage Wars Canada* is on TV in the Netherlands? We can help but there's a good chance we'd still forget your birthday. Sorry.





FxGuru: Movie FX Director

iPhone, iPad, Android

Your friends are all bored to tears of your home videos. Until one of the kids does something incredible, like survive a missile attack or an encounter with a UFO, they'll continue to just about feign interest. FxGuru will fool them into thinking they've done just that (as long as your friends are quite stupid) with special effects that are superimposed as you shoot, with motion tracking allowing you to pan as you film.

FOR KEEPING KIDS QUIET...



BBC CBeebies Playtime

iOS, Android, Windows Phone

A lot of free apps for children make it way too easy for them run up huge bills through in-app purchases, but this is from the Beeb so there's none of that tomfoolery here – just a lucky dip of educational activities for pre-school kids, based on Mr Tumble, Tree Fu Tom and other CBeebies favourites.



Talking Tom Cat 2

iOS, Android, Windows Phone

Tom's not much more than a touchscreen Tamagotchi with mini-games, but his trick of parroting back whatever you say to him in a high-pitched voice never gets old (it's ripe for adult amusement when the kids have gone to bed); plus there are farts. And farts will remain funny until the day you die.



Peppa's Paintbox

iOS, Android

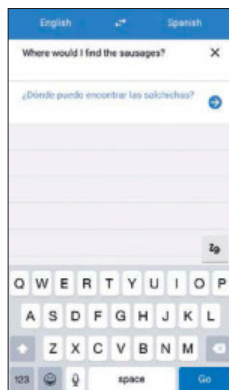
Like the CBeebies offering, this porcine painting app has no hidden agenda (well, maybe a harmless pro-pig one at worst) so your kids can paint away with Peppa without you having to worry about them being tripped up or led astray by ads, links or in-app purchases. Madame Gazelle would certainly approve.



Lego Juniors Create & Cruise

iOS, Android

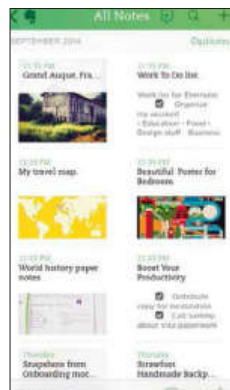
In gameplay terms it doesn't break any ground (it's a little like *Jetpack Joyride* crossed with *Flappy Bird*) but the option to customise and build your craft before traversing the map collecting blocks is what gives it that Lego twist – and the best part is, you don't even have to tidy up all the bits afterwards.



Google Translate

iPhone, iPad, Android

While it's not a good idea to completely rely on Google Translate, just in case you find yourself parroting 'could not connect to translator service' in perfect Swedish, it can be a lifesaver. It now translates (sometimes clunkily) into over 70 languages with input via text, speech or even text recognition via the camera. Pro tip: download language packs before you go to avoid bankrupting yourself with roaming charges.



Evernote

iPhone, iPad, Android

Evernote is a dumping ground (in a good way) for everything. Got a quick idea for something amazing? Pop it in Evernote! Got a receipt? Chuck it in Evernote! Fancy recording yourself yelling "AAARGH!" because you forgot to save a receipt in Evernote and have since misplaced it? Upload it to Evernote! It's clean, fairly simple, hugely flexible, very cross-platform, possibly a bit too green, and remembers stuff so you don't have to.



Autodesk SketchBook

iPhone, iPad, Android

Finger painting was just for kids until David Hockney and his iPad came along to prove otherwise. Now even *The New Yorker* has used an app (and the skills of Jorge Colombo) to create one of its covers. Autodesk's SketchBook gives you layers, opacity control, 15 preset brushes and a transform tool. And if you don't have an artistic bone in your body, you can always use it to add stupid cartoon glasses and beards to pictures of kittens.



Numerous

iOS, Apple Watch

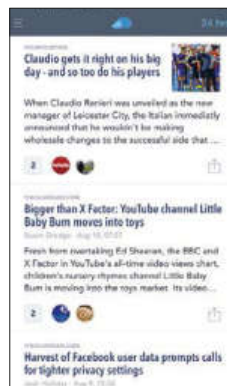
This is basically one of those 'The Month in Numbers' infographics that magazines do when they can't think of anything else to fill a page, but personalised for you, and therefore interesting. Connect other apps to Numerous and it'll create an at-a-glance scorechart of how you're doing at stuff. Doughnut Consumption Quota: 400%; Hours Spent Gaming: 32; Badgers Observed: 1. You are literally winning at everything.



Paper by FiftyThree

iPad

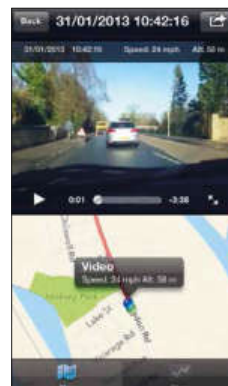
The iPad has loads of drawing apps but none of them nails the sensation of scrawling on a bit of ex-tree as elegantly as Paper. Open it up and you get a little set of notebooks; you can flip through pages and launch the editor with a tap. Drawing is responsive and fluid, as if you're finger-painting in the future. You used to have to pay for tools beyond the default brush, eraser and colour picker, but now the mixer and pens are all free.



Nuzzel

iOS, Android

Nuzzel might sound like an app that delivers kittens to your eyes in emergency situations but the app you're thinking of there is actually called Twitter. Nuzzel cuts out all that nonsense, taking the news links from your Twitter and Facebook feeds and removing the #humblebrags, #firstworldproblems and #transportchaos. It's a bit like being friends with a load of newreaders. Say hello to Jon Snow for us.



RouteShoot

iOS, Android, Windows Phone

You could record your commute on a GoPro but, when the only jumps you do are caused by unexpected horn-honks, it'd be overkill. Instead, put your phone's sensors to good use with this app, which shoots footage, links it with a map of where you've been on your bike and provides data on elevation and speed. Be sure to use a phone mount, or you'll end up with a short film of your device's untimely demise.

HOW TO... BE A WHATSAPP NINJA



1 Make it personal

If you've got an announcement to make but don't want to shout it from Facebook's rooftops, WhatsApp's Broadcast List function is like BCCing people on an email. Choose who to include, tap out your missive and they'll all think you composed it just for them. Nothing like that personal touch, eh?

2 Back it up

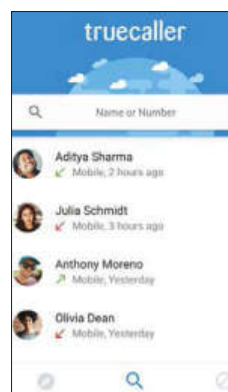
iOS can automatically back up all your chat to iCloud, but if you'd rather pick convos with individual people you can just email them to yourself from the app. On Android you'll need to copy a database called msgstore.db.crypt7, but transfer that to your new phone and you won't lose anything.

3 Private number

WhatsApp is very keen on telling everyone your business: when you've read something, last time you were online, whether or not you like Niknaks. It's a bit off-putting. Go to settings and in the privacy menu you can decide what to share (last seen, photo, status) with whom (everyone, your contacts, nobody).

4 Customifications

Some of your WhatsApp groups are more important than others. While you can probably mute that work one completely, that one where your friends organise FIFA games is pretty crucial and could do with its own alert. Tap on the group name, hit Custom Notifications and you can select a specific tone for it to use.



Truecaller

Android

Cold-calling, telemarketing weasels. We hate them, you hate them, and heck, they probably hate themselves. And since they won't remove you from their database, you can try another tactic. Truecaller will identify callers based on a global database and let you block the spammers. Bye-bye insurance robocalls and new credit card offers. You can add a few non-essential extras with a small, once-off, in-app purchase.



Google Authenticator

iOS, Android

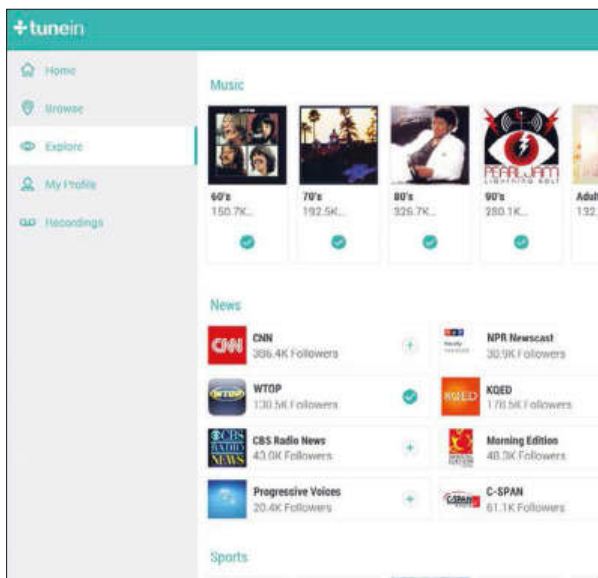
You know those one time pins your bank SMSes you while doing your internet banking? Authenticator is the app equivalent of one of those. You use it to generate a code before you can access your inbox (or Dropbox, or other services) on a new device. This means that even if someone gets hold of your password, they can't access your account unless they also have your phone.



NASA App

iOS, Android

Fancy an app that deals with the most breathtaking sights available to us paltry, insignificant human beings (that's outer space, not your collection of selfies)? NASA's app is full of spectacular images and videos from its archive, but it's also teeming with news and features on everything from cubesats to the progress of individual missions. Also handy if you're an alien species planning to invade our planet.



Tuneln Radio

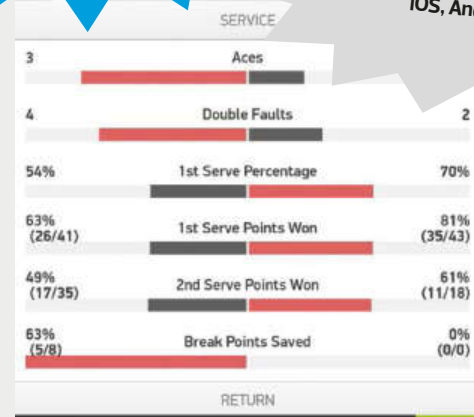
iOS, Android, Windows Phone

With Zane Lowe and Apple Music teaching the Snapchat generation that music isn't just something you find on YouTube, online radio has seen something of a recent resurgence. With its 100,000 live stations and two million podcasts, it's unlikely you'll ever be stuck for something to listen to on Tuneln Radio – plus you won't get Lowe shouting over the top of songs like he does on Beats 1. Oh, and there's no monthly fee to use it. Bonus.

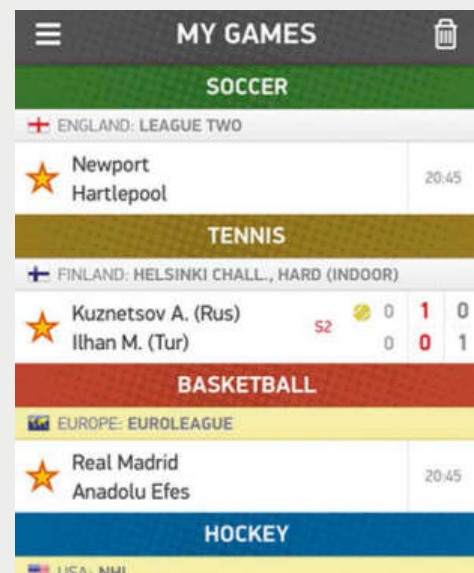
SO GOOD
I'D PAY
FOR IT...

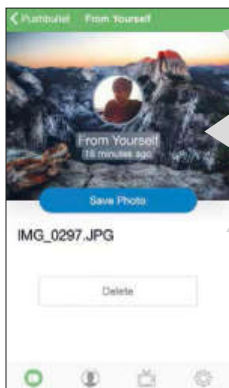
FLASHSCORES

iOS, Android



As out-and-proud sports nerds, scores and stats get us as excited as a four-year-old on Jelly Tots – and FlashScores provides us with both. We can follow any match from any tournament or league, in 29 different sports. All of you complaining you can't find a good enough app to follow Finnish pesäpallo or a bit of bandy in the winter – FlashScores has both of those covered and more. We're able to choose which matches we're interested in and set them to appear in the My Games folder; it then notifies us when the matches are over so we can check the final scores, with stats of varying depths that depend on how important they consider the match to be. We'd pay good money for FlashScores, because all our sporting eggs are in one simple basket.





Pushbullet

iOS, Android

To call this a messaging app is like calling the Sistine Chapel a tuckshop because they sell Pope-shaped chips outside. Technically it's true, but it's only a small part of what's on offer. Install it on all your devices and it allows you to respond from whichever one is nearest, whether it's a text, Facebook post or WhatsApp message. You can even send documents back and forth if you don't want to use Dropbox or Google Drive.



Navmii GPS

iPhone, iPad, Android

Without Google Maps most of us would spend our days wandering about aimlessly, shouting the name of the place we were looking for in the hope someone would help us find it. But Google Maps relies on a data connection, which isn't always available (or affordable if you're abroad). Navmii is based on open-source maps and provides voice-guided GPS for free. Just download the localised version before you leave.

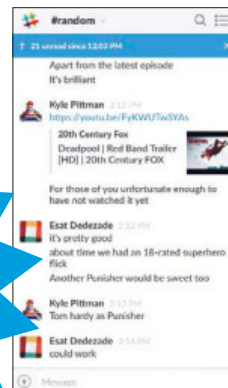
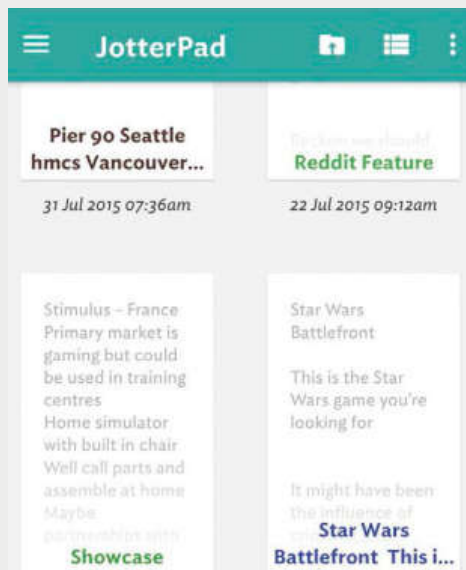
SO GOOD
I'D PAY
FOR IT...

JOTTERPAD
(WRITER)

iOS, Android



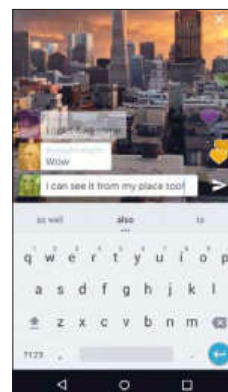
This isn't the most exciting app out there. It's not an action-packed game, it won't navigate the streets of Hong Kong, and it can't beam translations to a smartwatch. What it does offer is an easy way to write while we're out and about (or suffering on a two-hour commute). Its clutter-free interface lends itself well to smaller screens, and we've typed out entire stories on the Gautrain with minimal fuss. It also supports cloud storage, so your work will be waiting for you in the office. Word counts, undo/redo and a built-in dictionary are included, and you can save what you write in anything from plain text files to .docx and Markdown. It saves everything as you type, so you'll never lose anything either. IAPs include custom fonts and a thesaurus, but it serves its purpose beautifully in its base state.



Slack

iOS, Android

It wears the beard of business, and talks about 'all your team communication in one place', and that is one side of Slack. It's a real-time messaging system, where you can talk all business about business things, and almost never drift into a conversation about jetpacks. But Slack also works as a group communication tool for anyone, and it doesn't care if you're iPhone, Android, Mac or PC. There's even a Windows Phone version on the way.



Periscope

iOS, Android

Unless you're someone like Danny Dyer or Craig David, there's probably not a lot in your daily life that's worth livestreaming. But every now and then an ordinary (wo)man sees something extraordinary that should be shared as it happens, such as a stampee of duck-sized cows, or a flock of cow-sized ducks. For those moments there's Periscope, which lets you livestream video to the world from your phone's camera.



AfricaWeather

iOS, Android, BlackBerry, Windows Phone

So you want to know when the next Highveld thunder storm is coming for your appliances or when the surf is going to cook? AfricaWeather, which is backed by the SA Meteorological Office, will give you highly detailed forecasts in this relatively basic app. You can pick it up off Android under the name WeatherSA. There are even paid-for hail warnings, which will make your insurance broker happy.



Autodesk Pixlr

iOS, Android

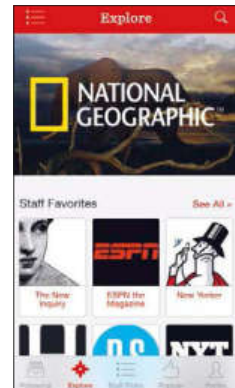
Which photo editor app you use is largely down to personal preference... but allow us to make a case for Pixlr. It has an absurdly huge range of tools (especially for a free app) enabling you to do anything from adding radial focal blurs or cropping and rotating, to smothering in crazy effects. Most importantly it's ad-free, so it's never suddenly covered by a crummy game banner and won't watermark your pics with its logo.



Instapaper

iOS, Android

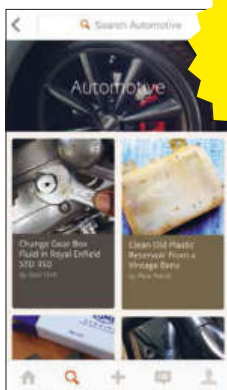
Sometimes you'll stumble on an online article but don't have time to read it because you're busy saving a pet dog from a swarm of rabid seagulls, or teaching Julius Malema how to smile. Download Instapaper and you can save it for later (the article, not the hound). Articles are stripped back to just words and images, making them easier to read than most mobile sites, plus you can fiddle with styles and organise your list in all sorts of ways.



Longform

iOS, Android

Sometimes it seems the internet's all cat pictures, BuzzFeed lists and Kim Kardashian. Longform pushes all that to the side and only collects together stuff that's over 1500 words long. You can follow particular writers and publishers, or just let the Longform staff pick stuff out each day that they think is worth spending another 10 minutes looking at your phone for. As if you wouldn't be doing that anyway...



Snapguide

iOS

We're not even sure what a French drain is, but Snapguide's how-tos are so comprehensive we now know how to install one. Tips are sorted under arts & crafts, food, gardening, lifestyle, tech, beauty, home and automotive – and if you've got a hack of your own to share you can publish it for others to try out. Of course, you could always just turn to p109 and check out *Stuff's* Projects section, which has that covered too.

BEST FREE GAMES



Crossy Road

iOS, Android, Windows Phone

Crossy Road's multi-species take on the *Frogger* format might seem like nostalgia but this road-safety-'em-up's procedurally generated carriageways plant it firmly in the present. You can pay to unlock more characters, but the gameplay's so perfectly pitched you'll never feel the need to.



Spaceteam

iOS, Android

Stuck on a critically damaged ship that's getting worse by the minute, you and up to three real-life chums must use your individual iOS or Android devices (you can even talk over Wi-Fi) in an attempt to survive, shouting instructions to each other as you go. Engage the Gyro Socket Pulley! Caramellise the onions!



Magnetic Billiards

iOS

A touchscreen reboot of that weird game you sometimes see nobody playing in the corner of musty old pubs, the aim of *Magnetic Billiards* is to rack up a huge score by walloping your shots off as many cushions as possible and collecting colour-matched balls in groups. Play with a Castle draft and a roll-up for maximum realism.



Score! World Goals

iOS, Android

As free games go, it's hard to find one with more to offer than this. Your task is to recreate over 1000 famous (and not so famous) goals from world football, drawing the path of the ball with your finger before tucking it into the net, including everything from intricate passing moves and lightning counter-attacks to dead-ball wonderstrikes.



Novation Launchpad

ios

Music apps are often either so simple a member of One Direction could get a tune out of them, or so complicated you'd need all eight of their arms to control them. This falls somewhere between the two. It's essentially a board of pads, which you prod to trigger preset loops, organised into genre-based sets. It's almost impossible to play something that doesn't make you want to dance about like a loon.

FOR YOUR SMARTWATCH...



Onefootball

Apple Watch

If you support your team from the very bottom of your armchair, or just can't make it to a game, Onefootball stops you having to compulsively check the score every two minutes. If there's a goal in a game you're following, you'll get a tap on the wrist to let you know, leaving you to hope it's gone in at the right end as you lift your arm to check.



Yahoo Weather

Apple Watch

You're about to go for lunch, it looks a bit breezy and those clouds are more than a little threatening. Is it Phil Collins (*No Jacket Required*) or will you get chilly when you're Cliff Richard (in the shadows)? Yahoo's forecasting app will show you current conditions, and your predictions for temperature, wind speed and rain over the next few hours are a tap away.



Misfit Pebble

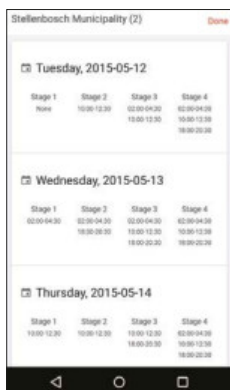
If you're wearing a smartwatch there's little point in strapping a fitness tracker to your wrist as well. Pebble has a Misfit app that'll do a lot of what its standalone wristband does: it counts your steps and tracks your sleep. That's pretty basic compared to some rivals, but with all its other skills we can excuse the Pebble for not being such a keen gym bunny.



Google Keep

Android Wear

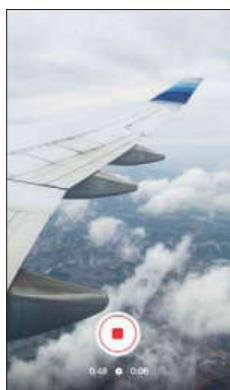
Some things make a lot of sense to have on your watch; others don't. There's not a lot of point in being able to read an entire ebook on it, but something to show shopping lists when your hands are full in the supermarket makes sense. That's Google Keep, which allows you to make notes and read them on your watch face. Remember rocket!



EskomSePush

ios, Android

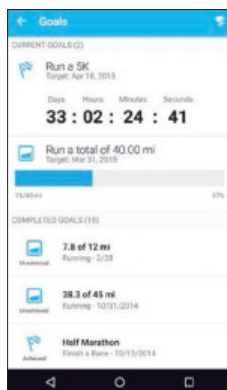
At the time of writing, Eskom's behaving a little better than it was at the beginning of the year. But the good times can't last forever, and when it does all fall down again, you're going to want to know when it will be your turn for the lights to go out. EskomSePush will give you the low down on load-shedding in over 50 000 locations around South Africa, from Cape Town and PE to Pretoria and Jozi and almost everywhere in between.



Hyperlapse

ios

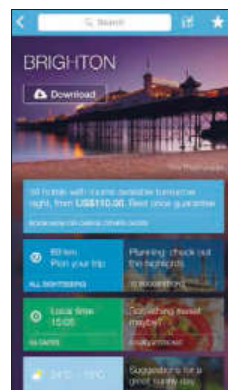
Sometimes the thing an app claims to do isn't the thing it's necessarily best at. So while Hyperlapse does allow you to shoot excellent timelapses without having to leave your phone on a tripod for eight hours, its hand-steadying tech is also brilliant for settling down normal-time videos. It uses your phone's gyroscope to work out how much you were shaking and slathers the whole thing in buttery smooth algorithms. Handy.



Runkeeper

ios, Android, Apple Watch

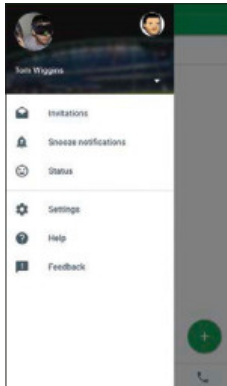
If you prefer two legs to Strava's two wheels, try Runkeeper. This virtual back-patter helps to spur you on during your run but its main job is tracking your route then doing the maths to tell you (and the entire world via social media if you want) how many calories you've burnt, how far you've gone and generally how heroic you've been over the past week or so.



Triposo

ios, Android

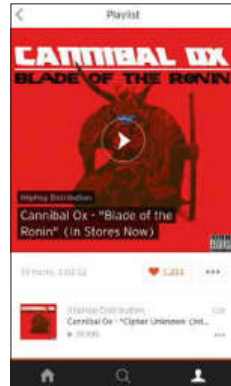
Travel apps are often restricted to major cities but Triposo doesn't discriminate. It even suggests a trip to the bus garage if you happen to find yourself in Sutton in the UK (although it's a long way down the list). Along with suggesting things to see, Triposo can build a city walk for you to take in the sights, based on the amount of time you want to spend ambling about. Most usefully, it works offline (assuming you download the relevant data first).



Hangouts

iOS, Android

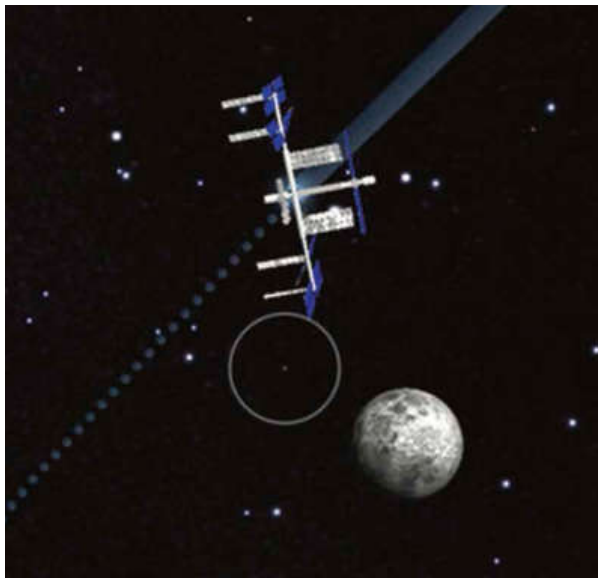
"Hey! Who wants brunch at Wimpy today?" "Count me in! I've got tickets to the Chief's game, wanna come too?" We know, Google's vision of the world is nothing like yours. But that doesn't mean you can't use Hangouts to do things real people do, like message friends via text, video, or the modern-day hieroglyphics, emojis. "Load-shedding again" or "Dad, get on the video call so you can show me how to fix the stove". That sort of thing.



SoundCloud

iOS, Android

Spotify might be free to download but to get the best out of it you need a R150/month Premium account. SoundCloud, however, is completely free and actually offers stuff that Spotify can't: DJ mixes, remixes, off-the-cuff covers, live recordings and recitals, snippets, sounds and spoken word. That's because anybody can upload stuff to it, not just international superstars and Mick Hucknall.



SkyView

iOS, Android

Thanks to tedious marketing campaigns besmirching its good name, augmented reality has fallen by the wayside of late; but every now and then something reminds us how great it can be. SkyView is one of them. Pop outside at night, point your phone or tablet towards the heavens and it'll show you precisely which stars and planets you're looking at. It'll work indoors, too – although, while it might be warmer, the view's not as good.

WHAT DO YOU MEAN YOU HAVEN'T GOT...

Ten must-have apps that are so obvious we hardly need to mention them



Google Docs

iOS, Android

Still using Microsoft Word? How about you give us a lift on your penny farthing as well, grandad.



Uber

iOS, Android, Windows Phone

Need to get a ride in a hurry? Uber sends a car right to you and works in dozens of cities.



Google Maps

iOS, Android

If you don't have Google Maps, you're probably reading this lost in a field somewhere.



Apple Music

iOS

At time of printing there's still a full three months of free music to tempt you away from Simfy.



Shazam

iOS, Android, Windows Phone

The closest thing to real magic that exists is Shazam's song-spotting technology.



WhatsApp

iOS, Android, Windows Phone

If they're on iOS there's iMessage; for everybody else there's WhatsApp.



Find My iPhone

iOS

Indispensable if you lose your iThing; you can locate it on a map and display contact details.



Citymapper

iOS, Android

Now available in nearly 30 cities around the world, it's our go-to public transport app.



Instagram

iOS, Android

Not into Instagram? Just think of all those life-affirming likes you're missing out on.



Twitter

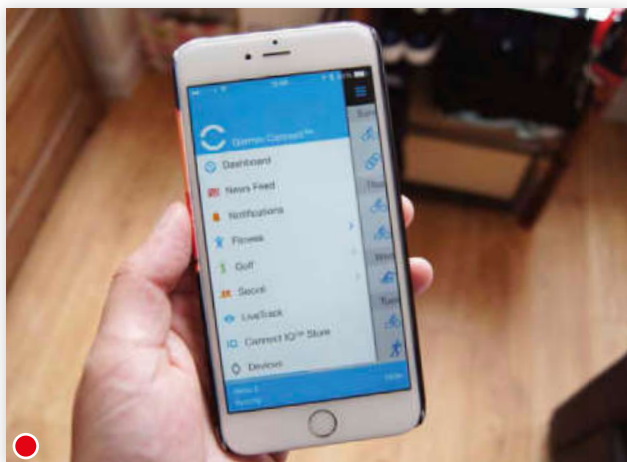
iOS, Android

We prefer Tweetbot but there's not a lot wrong with Twitter's official app.

Tri'ed and tested

Stuff trains for (and completes) a triathlon with a little help from the fanciest fitness/smartwatch in town

from R8 000 / garmin.com/za



● DAY 01

There are smartwatches that dabble in fitness, and fitness watches that dabble in smarts, but there's no perfect blend of both. Our triathlon ambitions mean our priority is fitness tracking with smarts as a sweetening extra, which is why the Fenix 3 appeals so much.

This is a watch that tracks loads of sports, works as a casual tracker of steps and sleep, and connects to your smartphone to relay every notification imaginable: messages, emails,

switched it out for the bundled sporty rubber wristband.

There's something charmingly 'real watch' about the button controls dotted around the circular housing. Each button has a primary function and a secondary one that's accessed by a long press: the Light button can be held down to access the Lock Device and Power Off options; hold down the Up button and you're taken to the main menu system, where you'll find Settings, Training, Alarms and lots more. It seems a little confusing at first, but within

This is a fitness watch you could wear every day, with a suit, and no-one would think it was out of place

WhatsApp, soccer scores, Twitter, etc. It can control your music and sync all your workouts for endless on-phone analysis, and it's got built-in compass, weather, altimeter, barometer and thermometer apps.

The watch itself is pretty big, especially on my dainty wrists, but it's undeniably classy – a watch you could wear every day, with a suit, and no-one would think it was out of place. The Sapphire version we've got even comes with a stainless steel link wristband for a bit of extra class. We're not that classy, so we've

15 minutes or so we're starting to get our head around where each button takes us.

Most of the setup can be done on the watch, but the Garmin Connect app is needed for syncing and more advanced settings (plus adding third-party faces, widgets and trackers – surfing, anyone?). It's not too pretty, but the app is great for tracking your overall progress; it even connects with other apps such as MyFitnessPal and Strava for automatic calorie and cycle/run syncing. That sort of openness is a rare delight.





Tech specs

Display

1.2in/3cm colour LCD, 218x218 pixels

Waterproof

Up to 100m

Connectivity

GPS, GLONASS, Wi-Fi, Bluetooth

Tracking

Cross-country snowboarding/skiing, climbing, hiking, running (indoor and out), cycling (indoor and out), swimming (indoor and out)

Battery

300mAh

Dimensions

51x51x16mm

Weight

85g

The smart, classic design is likely to appeal to those who dislike 'sports' watches



DAY 02

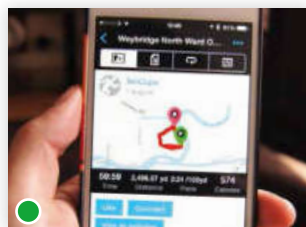
The Fenix 3 tells us last night's sleep was rather fitful, but that's not going to stop us going for a run. One press on the Start/Stop button takes us to the available activities, then we scroll down to select Run. It takes about five seconds to find a GPS signal then we're off. The standard readout shows your distance, a stopwatch and your pace, and you can scroll down for more. Weirdly, none of these screens shows the actual time, so after our plod around the park we customise the first screen to add that in. Also, there's no heart-rate tracking here so we think we'll be investing in a chest strap that the watch can connect to. You can do the same with cadence sensors for superior cycle tracking.

DAY 10

The benefit of not having heart monitoring built in is that today is the first day we've had to charge the Fenix 3. There's a proprietary clip-mount included that you plug into any USB socket. Easy and quick.

DAY 17

This is why we really wanted this watch: open water swim tracking. Not only does the Fenix 3 survive



DAY 40

nearly an hour in the nippy, murky water; it shows us the GPS-mapped route we took, the distance we travelled (We really need to swim straighter), our pace, calories and even stroke rate. This is more feedback than you'd get from a swimming instructor.

DAY 50

We don't think we could go back to not having notifications on our wrist. When using an iPhone 6 Plus, we only need to get it out of our pocket when the latest vibration is actually something important.

DAY 90

We've just discovered LiveTrack. This sends an email to anyone you want so they can view your race or training in real time. You need your phone on you, so it won't work for swims, but it's great for long rides.

STUFF SAYS

Triathlon day, and the Garmin's proved invaluable in getting us prepared. The dedicated Triathlon mode should be great here, but unfortunately in the (literal) heat of the race we press the wrong button and pause the timer rather than tell it we've hit transition. That's user error, though – we still love the Fenix 3.

The smartest, stealthiest, downright fittest fitness watch in town (or the lake)

★★★★★

EOS-y does it

Canon's new entry-level DSLR is supremely simple to use and a spectacularly sharp performer

from R7 400 (body only) / canon.co.za

■ Pity the poor DSLR. Five years ago they ruled the photographic roost, but with 13MP now sitting in every pocket and mirrorless cams stealing the hipster market, their territory's being squeezed like a lemon at Ocean Basket. Canon's solution? Create what may be the ultimate entry-level snapper.

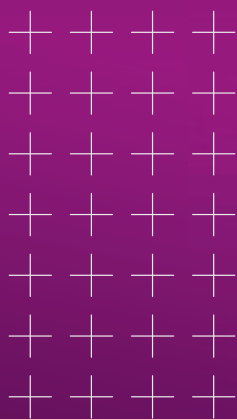
■ The 750D's big win is in usability. It feels great in the hand and has plenty of physical controls for easy access to the likes of shutter speed and autofocus mode, but also comes with a touchscreen. Plenty of other cams (including its predecessor the 700D) have one, but this version is impressively responsive and accurate. Add in the fact that the 3in/7.6cm LCD can be flipped out and twisted around, and you have a whole new way of shooting.

■ Picture quality is superb. The 750D has Canon's new 24.2MP CMOS APS-C sensor inside it and it serves up bags of detail in most conditions. You can ramp the ISO up to 800 and hardly see any noise; even 1600 and 3200 are usable. Video quality is fine, but there's no 4K or 1080p @ 60fps here.

■ Autofocus is even better. You get 19 points and it locks on in a flash whether you're shooting through the viewfinder or using Live View on the screen. Do the latter and it'll even continuously focus for you – good for easy subject-tracking, great for video.

Tech specs

Sensor 24.2MP CMOS APS-C
Processor DIGIC 6 **Autofocus** 19 cross-type points **ISO** 100–12,800 (25,600 in expanded mode) **Display** 3in/7.6cm LCD TFT touchscreen, 1040k-dot **Flash** Built-in
Dimensions 132x101x78mm, 555g



■ **App's the way to do it**
 Hook up your phone over Wi-Fi and you can use the excellent Camera Connect app to snap away remotely. You get full control over all settings and can easily download images straight to your mobile for easy sharing.



■ **Seeing double?**
 Don't be confused by the almost identical EOS 760D. It's exactly the same on the inside and takes identical pictures but is aimed at experienced shooters, with more manual controls, an extra display on the top and a R700 price hike.

STUFF SAYS Remarkably easy to use, with remarkable image quality for the price ★★★★★

But aren't compact system cams a better bet?

CSCs have now surpassed DSLRs in many ways: they're always smaller, usually prettier and sometimes cheaper. But they're not so hot on usability. That's not surprising: it's harder to find room for physical controls on a small body, so settings are often hidden within menus. That won't be a big problem for everyone, but it might be if you're a beginner who wants to learn the basics of photography.

OUR HEARTS ARE IN IT



As seen on DStv *Spiny* JHB 50216/OJ

ALL 48 RUGBY WORLD CUP 2015 MATCHES LIVE 18 SEPTEMBER – 31 OCTOBER.

Only SuperSport brings you expert analysis from local and international pundits on all Rugby World Cup 2015 matches. Our rugby buffs will meticulously break down each game during the match build-up. Followed by an action-packed wrap-up after the final whistle. If you miss a game, all the extended highlights are available on DStv Catch Up.



- 1 RedOkar card holder
R195 / equality.co.za
- 2 Haemmer Germany watch
R8 300 / haemmer-germany.co.za
- 3 Trenery leather wallet
R600 / woolworths.co.za
- 4 Black sneakers
R500 / zara.com
- 5 Denim jacket
R1300 / equality.co.za
- 6 Lacoste Eau De Lacoste L.12.12 Jaune
R1010 (100ml) / redsquare.co.za
- 7 Blunt XS Metro umbrella
R600 / bluntumbrellas.com/za
- 8 Fisherman's Friends lozenges
from R18 / fishermansfriend.com/en-za
- 9 Kurt Geiger deodorant body spray
R100 (200ml) / kurtgeiger.co.za
- 10 RedOkar leather satchel
R3 000 / equality.co.za
- 11 River Island Fedora
R500 / riversland.com

CRAFTWORK

Unleash your inner hipster with these creative, hand-crafted, micro-brewed adornments for every part of your body.



- 1 Michel Herbelin
R16 500 / arthurkaplan.co.za
- 2 Tissot
R5 150 / arthurkaplan.co.za
- 3 Victorinox Swiss Army
R9 300 / picotandmoss.co.za

- 4 Zenith El Primero
R100 000 / picotandmoss.co.za
- 5 Tissot
R22 400 / arthurkaplan.co.za
- 6 Carrera by TAG Heuer
R38 000 / picotandmoss.co.za

- 7 Rado
R13 900 / arthurkaplan.co.za
- 8 TAG Heuer
R24 500 / picotandmoss.co.za
- 9 Longines
R44 000 / arthurkaplan.co.za

- 1 Viktor & Rolf Spicebomb Extreme
R1100 (50ml) / redsquare.co.za
- 2 Yves Saint Laurent Kouros Silver
R820 (50ml) / redsquare.co.za
- 3 Ralph Lauren Polo Red Intense
R1000 (75ml) / redsquare.co.za
- 4 Michael Kors For Men
R975 (75ml) / redsquare.co.za
- 5 Giorgio Armani Acqua di Gio Profumo
R1275 (75ml) / redsquare.co.za



6



2



3



4



5



7



8

- 6 Kurt Geiger Eau De Parfum Pour Homme
R695 (100ml) / kurtgeiger.co.za
- 7 Diesel Only The Brave Wild
R945 (75ml) / redsquare.co.za
- 8 Boss the Scent by Hugo Boss
R1185 (100ml) / redsquare.co.za



1 Bonafide Beards All Natural Mustache Wax
R90 / bonafidebeards.com

2 Eucerin Intense Anti-Age Revitalising Care for Men
R200 (50ml) / zara.com

3 Kiehl's Oil Eliminator 24-Hour Anti-Shine Moisturizer For Men
R340 (125ml) / kiehls.com

4 Kiehl's Facial Fuel Eye De-Puffer
R460 (5g) / kiehls.com

5 Bonafide Faces All Natural Badger Shaving Brush
R450 / bonafidebeards.com

6 Vichy Homme Sensi Baume Soothing After Shave Balm
R275 (75ml) / vichy.co.za

7 Bonafide Faces All Natural Shaving Soap in Ceramic
R290 / bonafidebeards.com

8 Lancôme Advanced Génifique Youth Activating Concentrate
R780 (30ml) / redsquare.co.za

Media hoard

Ronnie and Reggie have asked us to point out that you'd better read this month's reviews of new films, music and books very carefully if you know what's good for you

WATCH

Legend_cinema

Fresh off the back of doing a voice in *Mad Max: Fury Road*, Tom Hardy does two at once in this Kray twins biopic. *Legend's* source material is John Pearson's book *The Profession Of Violence*, but director Brian Helgeland's swinging '60s aesthetic means it often feels as if Guy Ritchie's directed an episode of *Heartbeat*.

While the Krays are portrayed as almost comic-book cockneys, this is no gangster origin story. Hardy plays both brothers: Reggie, almost inevitably, as a young Ray Winstone, and Ronnie as a psychotic Mark Lamarr from a *Shooting Stars* sketch (that's meant entirely as a compliment). It's Ron who provides most of the

laughs, although they dry up as the film goes on and the brothers' impact starts to affect more than just their cashflow.

It was their affection for their community – and for their mum – that gave the Krays an easy ride in the eyes of society, and it's hard not to accuse a film called *Legend* of glorifying their lifestyle. Both are likeable, but also shown to be capable of breathtaking violence; and while it doesn't condemn them heavy-handedly, you can't leave thinking what they did was anything but heinous.

Despite an early reference to General Custer there's [spoiler] no heroic, Western-style last stand – and that should say enough.

STUFF SAYS ★★★★★



Fast & Furious 7 _Blu-ray, DVD, VOD

People tend to sum up the *Fast & Furious* series into either 'awesome' or 'crap'. We, however, can see the myriad peaks and troughs, and while the first two and the last one were pretty great, 7 is a car crash. Lines such as "The bravest thing you ever did was become a husband and father" make *Furious 6* look like *Hamlet*, and the action is ludicrous.

STUFF SAYS ★★☆☆☆

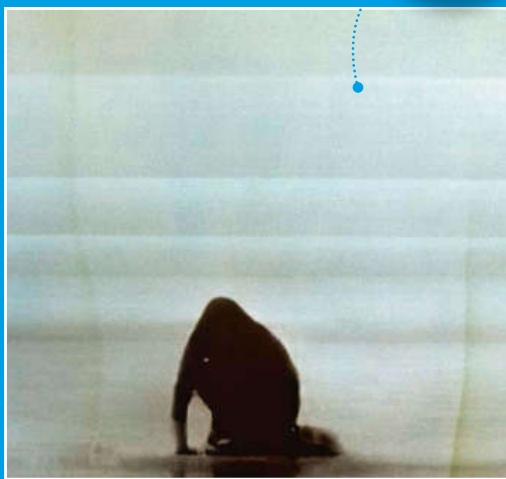


Dope_cinema

Harvard-bound Malcolm and his pals are more into Bitcoin than bitches, but in LA's notorious Inglewood these geeks find it hard to dodge the dark side. With meme-worthy moments and a genuine, if clumsily delivered, message, *Dope* mostly avoids the lazy gross-out gags that teen comedies usually rely on, making it a sort of *In Da Breakfast Club*.

STUFF SAYS ★★★★★

LISTEN



What Went Down_Foals

Born from early-noughties nu-rave and with a penchant for math-rock and minimal techno, Foals have spent the past 10 years with their guitars hitched up just under their hearts, trying to package up all three. This is probably the closest they've come since 2009's *Total Life Forever*.

They certainly still know how to deploy a cleanly picked riff. *Birch Tree* is

bliss-out-with-your-hood-up stuff, *Albatross* soars, and the title track has a strong claim for single of the year (if such a thing still exists).

That said, there's something about it that falls just short of five stars. Combine their last three records and you've got a stonker, but as it stands Foals' quest for their own holy grail continues.

STUFF SAYS ★★★★★



Anthems For Doomed Youth_The Libertines

Does anybody still care about The Libertines? If their Glastonbury crowd is anything to go by, yes. *Anthems For Doomed Youth* won't put them back on any front pages but, while it doesn't teeter on the edge of falling apart like their records used to, it's certainly not the complete disaster many expected. STUFF SAYS ★★★★★



Depression Cherry_Beach House

If you liked Beach House in the past, you'll find *Depression Cherry* as dreamily hypnotic as ever. It adds welcome bite on tracks such as *Sparks*, and spoken-word weirdness on *PPP*, but lacks previous records' tear-jerker hooks, which serves to make it a bit wallpaper. Essential? No. Still beautiful, though. STUFF SAYS ★★★★★

READ



Armada_Ernest Cline

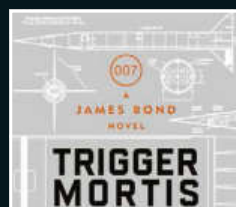
Ernest Cline's first book, *Ready Player One*, stars a boy with a talent for old video games and '80s pop culture. It's fun, fast and imaginative. *Armada* is the same book but not as good, and with aliens.

Still, if you're the sort of infantilised adult who endlessly rewatches kids' films from the late '70s and '80s, snuggle into the vintage Jabba the Hut beanbag you inevitably

own and get reading; this is a firehose of references to the movies, toys and games you've conditioned yourself to enjoy. The plot is *The Last Starfighter*, and the characters speak in *Star Wars* and *Iron Eagle* quotes.

Armada is a pacey thriller, but it's so unoriginal that you're left wondering if George Lucas should get a cut of the royalties.

STUFF SAYS ★★☆☆☆



Trigger Mortis_Anthony Horowitz

Horowitz wrestles with the conundrum of any officially licensed Bond novel: how to stay faithful to Ian Fleming's sneery, leery spy of the 1960s without offending modern readers. He gets away with it (just), and the fast-cars-and-rockets plot – originally proposed by Fleming for a 007 TV series – is high on action. STUFF SAYS ★★★★★



The Rise Of The Robots_Martin Ford

The subtitle 'Technology and the Threat of Mass Unemployment' says nearly all you need to know about this genuinely scary tract. Firing off academic references from every angle, Ford makes a strong case that the real danger is not tech itself, but unbound capitalism. The capitalists won't listen, of course. Hooray for neo-serfdom! STUFF SAYS ★★★★★

PS4, PS3, Xbox One,
Xbox 360, PC /
konami.jp/mgs5

Metal Gear Solid V: The Phantom Pain

Metal Gear goes open world, but holds on tightly to its trademark blend of grit and silliness... for better and worse

You creep into an enemy base inside a cardboard box and chuck a disc that swells into a life-sized doll that somehow distracts the guards long enough for you to slap them into unconsciousness. Then you strap them to a balloon – and in 30 seconds they've made it from Afghanistan to your base in the Seychelles, and have also been converted to good guys.

Such are the escapades of *Metal Gear Solid V: The Phantom Pain* – spy novel antics that are

more Inspector Gadget than 007. Those familiar with the franchise will recognise its mix of whimsy and seriousness, but as with previous entries, whether the game is a self-aware pastiche or unintentional farce isn't clear.

But none of *The Phantom Pain*'s sillier ideas are executed badly. Its stealth-based infiltration and cover shooting action are gold standard. The question of whether you connect with its Japanese idiosyncrasies is largely one of taste, not quality. *MGS5*'s

design is competent, its choices discrete, and consequences measured. In some ways it's more of the same: sneak around, reach your objective, possibly cause some chaos. In other ways the game has become more clever: choose to consistently enter bases at night and soldiers will start to don night-vision goggles. Get too fond of playing sniper and your enemies will go for bulletproof helmets.

It's around the edges where *The Phantom Pain* sometimes misses

the mark. Its open world just isn't as 'alive' as that of *The Witcher 3*, and as each mission encourages you to drop down in a chopper, it's broken into mission segments. And there's lots of padding: an HQ to be managed, soldiers to be sent on missions, and more upgrades to be unlocked than there are seals in the sea.

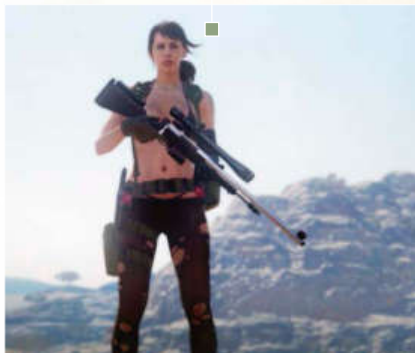
Yet, somehow, it does work. Originality, gender equality and suspension of disbelief are far from *MGS5*'s strengths, but it remains an entertaining romp.

STUFF SAYS Some will love it, others hate it, but this is *Metal Gear* at its most ambitious ★★★★★☆



The only female protagonist is mute, and wears a bikini. Sigh...

Choose your loadout, companion and vehicle before each mission



What the flip is going on?

Over the years, the *Metal Gear* series has endured more twists and turns than a bowl of spaghetti – so, for those unfamiliar with its story, let's clear a few things up.

The Phantom Pain takes place in the year 1984, after *Metal Gear Solid 3* but before *Metal Gear Solid 4*, and is the sequel to *Metal Gear Solid: Ground Zeroes*, thereby laying the foundation for *Metal Gear*, *Metal Gear 2* and eventually *Metal Gear Solid*.

Our hero here is called Snake, but no, this isn't Solid Snake. In fact, *The Phantom Pain* is centred around Solid's genetically identical father, also known as Big Boss, Naked Snake, or Punished 'Venom' Snake, who is definitely not to be mistaken for Liquid Snake, or Solidus Snake, who are, like Solid, both also genetic clones of Big Boss. So, if we're getting technical, this outing really should be called *Metal Gear: Naked*.

Naked, aka Big Boss himself, is a former FOX agent who is the non-biological progeny of 'The Boss', whom he was forced to kill a couple of games ago. He's just awoken from a nine-year coma and seeks revenge on the people who put him there. See, it really couldn't be simpler.

PS4 / thechineseroom.co.uk

Everybody's Gone To The Rapture

It's one of the least game-like games there's ever been, but everybody should 'play' this beautiful, melancholic sci-fi story set in the heart of England

The definition of what constitutes a game has been stretched and twisted over the last few years. This is largely a result of Telltale's *Walking Dead* and *Game Of Thrones* series, in which the story is only occasionally broken up by instances of button-mashing or decision-making.

Everybody's Gone To The Rapture chucks away even the button-mashing and decision-making. It has no fighting, no running, no jumping, no enemies, no instructions, no prompts of any kind. The story isn't even happening to you, *per se*. Instead, you wander around a picturesque English village trying to understand what happened to the occupants, who seem to have vanished.

Doing that involves following a ball of glowing energy, which guides you to other balls of energy that transform into fragments of events and conversations from before whatever happened, happened. These echoes from the past are played out in light – they're beautiful and the voice acting, while

occasionally a little bit *The Archers*, is very convincing overall.

Yaughton itself is an idyllic recreation of an English village. The way it looks and sounds makes it feel completely real, and some of the lighting is breathtaking. It's a joy to explore the streets, fields and woods, which you can do at your leisure – and if you don't find yourself fantasising about having a pint at the village pub, it may be that you've got no soul.

Other than pressing a button to open a gate or door, or turning your DualShock to 'tune in' to the energy flashbacks, there's no interaction at all. You just follow, explore, observe, and get taken in by the lives of the villagers and the gentle, intriguing sci-fi story.

If you just can't go five minutes without shooting an alien in the head, this isn't for you; but if the idea of walking through a novel about love, place, obsession, belonging, faith, science and the end of humanity appeals to you, this is a brilliant and beautiful way to spend R350 and an afternoon.

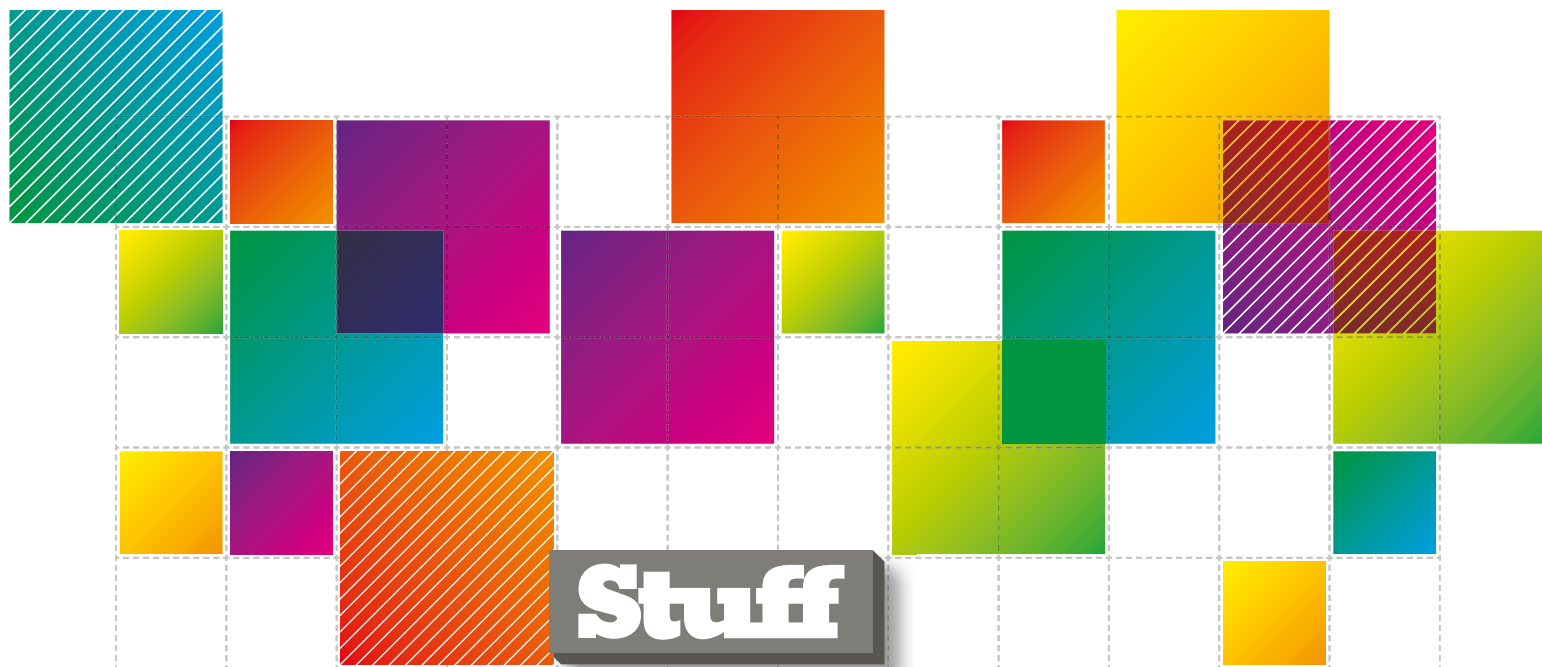


50p for a pint of ale! When is this, 1984? It is? Oh.



It's atmospheric – and there are moments that will astound you

STUFF SAYS More of an interactive sci-fi novel than a game, but in a fantastic way ★★★★★



PROJECTS

MAKE. DO. UPGRADE.



p90
BETA YOURSELF:
DRONE
PHOTOGRAPHY
Float like a butterfly, shoot like a professional



p92
PLAYLIST:
SUBREDDITS
Where to find the internet's finest orca/penguin mashups



p94
SUPER GEEK:
GUITAR AMPS
There's little point playing if the neighbours can't hear you



p96
INSTANT UPGRADES:
STAND-UP PADDLE-BOARDING
What's SUP, yo?



BETA
YOURSELF

DRONETOGRAPHY

Drones aren't just pigeon-bothering toys, they can be serious filmmaking tools. Toby Pocock, pro aerial snapper from Skyvantage, reveals how to unlock God Mode

THE BASICS

■ **Stay in range.** Choose a drone you can afford to crash. The DJI Phantoms are 'ready to fly' and easy to grasp, but the self-built DJI F550 Flame Wheel (R5 000, coptershop.co.za) is a very good basic aerial rig. Building kit drones usually involves soldering, so stick to pre-built models if you're averse to a bit of DIY.

■ **Pilot first, director second.** Before turning your camera on, learn to fly properly. As soon as you start to concentrate on filming, your attention will drift. RealFlight (from R1350, realflight.com) is a good home training



tool. Make sure your movements are gentle, smooth and slow.

■ **Ready for action cam.** You need a lightweight camera with a fast lens. GoPros are more than capable cameras for beginners and are very resilient to heavy landings. Make sure you shoot on 'medium' rather than 'wide' field of view (FOV) to avoid barrel distortion.

■ Gimbal all the way.

Stabilised gimbals, which hold your camera and adjust to keep it steady, are essential for aerial photography. 'Brushless' gimbals offer better stabilisation than servo-based ones. DJI's Zenmuse models are the best around and are also compatible with GoPros.

■ **Check the rules.** Tempting as it is, you can't just fly around like a chopper in Jozi. It's illegal to fly in most built-up areas and your drone has to be kept within sight. Local RC clubs often have good flying spots. Check the Civil Aviation Authority site (caa.co.za) for a full lowdown on drone rules.



SETTING UP

■ Watch the weather.

Before heading out, check accuweather.com for accurate wind forecasts. And try to shoot with the sun behind you or you'll get washed-out video.

■ **Pre-flight checks.** Dust the lens, check that the rotors are balanced and screwed on, and take a spare battery. Start flying your drone back when it has 15% battery left.

■ **Don't fly solo.** Bring a friend to be your 'spotter'. As you fly, get them to watch both the sky and the ground for obstacles. Dogs love a landing drone.



LEVEL UP WITH...



VIMEO DRONIES

vimeo.com/channels/dronies/videos

Yes, this channel is dedicated to the 'drone selfie', but don't reach for the shotgun just yet. Not only is it a good place to have a nose around some of the world's most spectacular destinations (think Hawaii rather than Halifax), its mix of filming styles means it's also a handy source of visual ideas for your upcoming drone epic.



AERIAL CINEMATOGRAPHY

facebook.com/groups/aerialcinematography/

Rather than discussions about 'command stick calibrations', this Facebook group highlights the most interesting drone films and is a good place to ask questions. Some of its posts offer handy tips, including how to use your GoPro's 'Protune' setting to make video editing easier.



SHOOTING TIPS

■ **Slow down.** Remember that your drone is an aerial platform. Let the subject be your focus, rather than trying to create a dramatic shot by racing around like a TIE Fighter.

■ **Beat the sun.** For sunny days, get a neutral density filter. Polar Pro (polarprofilters.com) makes these for GoPros and DJI drones to avoid the 'jelly' effect.

■ **Keep it steady.** If you're using a camera with manual controls (such as a Panasonic GH4 with a 12mm prime lens), aim to make your shutter speed roughly double your frame rate.

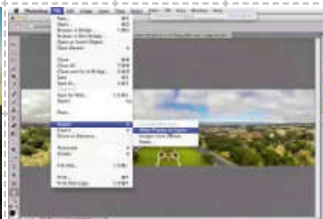


TRICK SHOTS

■ **Fly-by.** Fly very slowly towards one side of an object, then use the yaw (the left stick) to spin around and keep in focus.

■ **Panoramic stills.** Move your camera across the scene, making sure you overlay half of the previous image. Then use PTGUI Pro (R1220, ptgui.com) to stitch the images together.

■ **The drone selfie.** Start with your drone about a metre in front of you, then lift it a few metres off the ground before pulling it away in a straight line. Reversing this footage will look like an accurate zoom shot.



FIX YOUR...

■ **Prop shadow.** The sun can cast propeller shadows into your lens and create a flickering effect, so try to avoid flying directly towards the sun.

■ **Lens distortion.** Adobe Premiere Pro CC (R370/month, adobe.com) has a lens distortion filter for correcting fisheye. Its 'Warp Stabiliser' can stabilise shakes, though this can also make your image softer.

■ **Horizon.** It's best to make sure your horizon is straight during filming. But if you notice it's a little bit out, tweak it using Adobe's rotation animation tool.



DIY DRONING

curiositycampus.co.za

Cape Town-based maker community Curiosity Campus counts a number of drone enthusiasts among its members and earlier this year even ran a build-your-own drone course in conjunction with Flying Robot (flyingrobot.co). The group can also help with queries about building custom drone enclosures or even baking drone-shaped muffins for your new airborne robotic helper to deliver.



PLAYLIST

SUBREDDITS

Whether you're new to Reddit or you don't go a day without checking r/nintendomusic, here's the best of what lies beyond The Front Page of the Internet

r/EarthPorn

Before you report us for promoting some Mother Nature fetish site, we should point out that this subreddit focuses purely on pictures of the most beautiful, wondrous views of Earth. From spectacular waterfalls to caves peppered with bioluminescent algae, it's enough to infect the feeblest of agoraphobes with wanderlust.



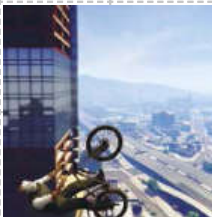
Oddly Satisfying

A perfectly colour-coded supermarket shelf. Ripping the cellophane wrap off a new gadget. Peeling back the lid of a jar of peanut butter to reveal a smooth, unbroken surface. Oddly Satisfying brings all of life's small but incredibly rewarding experiences together into a single online library of deliciously neat goodness.



Artisan Videos

This strangely relaxing subreddit is packed with footage of all sorts of amazingly skilled people who'll fill you with awe, from smiths hammering beautiful Damascus steel knives to street vendors whipping up crepes in seconds. We love cake decorating and candle carving, though we've also been known to dabble in a pottery vid or two.



My People Need Me

Describing this corner of the internet is a little tricky. It's packed with gifs of people and animals that make unexpected exits – the joke being that they have to dash because 'their people' need them. Naturally, many of its posts relate to moments of physics failure in *GTA V*. You'll laugh, we promise.



Cool Guides

These can teach you all about poker hands, how to defend yourself from a dog, and the meaning of different-coloured lightsabers, all within five minutes. The information varies from pricelessly useful to mind-bogglingly useless, but you never know – one day you might have to rely on making balloon animals to survive.



Unresolved Mysteries

This is an archive of real-world cases that have yet to be solved. It's a little dark (murder tends to be, after all) but it's also full of fascinating reads like the 14th century's English sweating sickness, or cases of spontaneous human combustion. The real mystery is how you'll get any work done (hint: you won't).

Hybrid Animals

The web will tell you Photoshop's main purpose is to make flaking celebs look like sex gods, but the web is wrong. The real reason is so that creatives can birth twisted (and often hilarious) animal hybrids. From the terrifying shark hippo to the eerie elephant cat, there's plenty here to both 'aww' and shudder at.





BECOME A REDDIT PRO



USE RES 4

Reddit Enhancement Suite is an absolutely indispensable tool for any Redditor — it should be a crime to be without it. From keyboard shortcuts to inline image viewing and much more. redditenhancement-suite.com



JOIN THE UNIVERSITY OF REDDIT

Oxford doesn't do a BSc in Cooking for the Single Life, but The University of Reddit does. There are more serious options like programming too, and a huge variety of free courses to wrap your brain around.

universityofreddit.com



TRY MERGING SUBREDDITS

Hopping between your favourite subreddits can be a chore, so use this URL trick to merge them together. Simply add a '+' then the name of one or more subreddits. `'reddit.com/r/wtf+startledcats'` yields promising results.



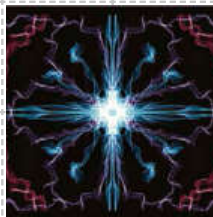
Ask Science

Why does orange juice taste like mouldy hellfire straight after you've brushed your teeth? Why does your cat always wink at you — is there a dead rodent on your bed? These questions and more can be resolved here, a place that puts Reddit's many engineer, scientist and health professional brains to good use.



Mechanical GIFs

Nature is astounding, but man-made objects can be equally impressive. If you've ever wanted to see incredibly intricate watch gears twirling, or machines carrying out tasks with inhuman precision, or if you just love seeing the smooth action of a well-oiled ball bearing in motion, then this is the place for you.



Internet Is Beautiful

The web can make you laugh, cry, or cringe so hard that you pull a muscle. But it can also be beautiful, and that's exactly what this subreddit celebrates. It's a collection of the prettiest, most useful sites on the internet and you'll get lost for hours flying through online galaxies, beatboxing using your keyboard, and everything in between.



Woodworking

If you're the kind of person who'll lovingly rub your hands over a perfectly fitted dovetail joint then you'll feel right at home in these sawdust-laden halls. Even if you're a complete beginner, you'll appreciate the craftsmanship on offer. Maybe one day you'll post pictures of your own polished mahogany fruit bowl.

SUPER
GEEK

GUITAR AMPS

Huw Price of *Guitar & Bass* magazine explains why amplifiers aren't just a large and heavy necessity, but one of the guitar world's tech innovators

Guitar amps haven't always been the eardrum-ripping monsters of rock we know today. During the electric guitar's formative years, amplifiers could only get up to a certain volume before a loud squealing noise we call feedback stopped the fun.

That all changed in the 1950s with the arrival of solid-bodied guitars. They didn't feed back, so players could turn up their amplifiers and hear themselves over the drums for the first time. In the process they discovered something that would change music forever: vintage amplifiers

use valves, which distort when they're turned up loud. Distortion may be the devil when we're talking about hi-fi amps, but a distorted guitar amp is a thing of beauty. It makes guitars scream, wail and sustain.

As the late Frank Zappa once said: "The disgusting stink of a too-loud electric guitar; now that's my idea of a good time." Overdriven amps are the sound of rock'n'roll, and are instruments in their own right.

My first amplifier, a 1972 100-Watt Marshall Super Lead, was memorable for a variety of

reasons, most of them bad. But it was so absurdly loud it made the windows of my parents' house rattle in their frames, and playing it felt like being pummelled about the ears.

These days, guitarists enjoy an amazing breadth of choice for amps. Digital modelling products are available as conventional combos or as software that runs on computers, tablets or smartphones. At the other end of the scale, 'boutique' makers such as Lazy J keep the focus on pure tone and hand-wired build quality rather than worrying

about gimmicks or gadgets. The best approach as a buyer is simply to find out which amps and FX pedals your favourite players use, then buy something similar to get the sound you like.

It took me many years, but I eventually stumbled across my perfect amp: a Fender Deluxe that was made in 1951. It needed a bit of TLC, but once I'd fixed it up I came to peace with the world of guitar amps. If a tweed Fender is good enough for the Eagles, Neil Young and Pete Townshend, it's more than good enough for me.

JARGON
BUSTER■ **WATTS (W)**

Watts equals power equals noise. For a valve amp, 8W is ample for home, 20W is enough for pubs, and anything over 50W will eventually deafen you. Transistor amps of equivalent ratings tend to sound notably less powerful.

■ **COMBOS & HEADS**

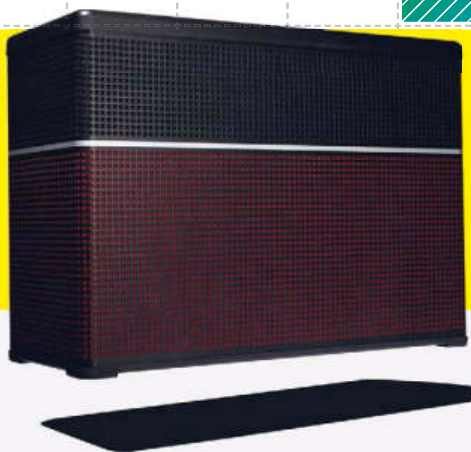
An amp and speakers contained in a single box are called a 'combo'. An amplifier without speakers is a 'head', and separate speaker units are 'cabinets' or 'cabs'.

■ **BOUTIQUE**

You've heard of boutique hotels and restaurants — there are boutique amplifiers too. Hand-built by specialists in low numbers, many look and sound amazing, but few are affordable.

■ **DIGITAL MODELLING**

DSP tech is commonly used to simulate the sounds of classic guitar amps. This means you can get hundreds of great sounds from a single amp, processor or program.



LINE 6 AMPLIFI

The variety of traditional guitar amps is overwhelming. Some are good for blues, others excel at clean sounds, some are made for metal. You could buy all of them, but a cheaper option is one of these 'modelling' amps. It has transistors rather than valves, but the digital sound processing can simulate a plethora of classic and modern valve amplifier tones. You can use the dials on top, but there's also a mobile app and an Apple Watch app for switching sounds mid-set. There's also an online community of users with whom you can share tips, tricks, tones and even backing tracks to jam along to.

from R6150 / marshallmusicdirect.com

THE
ALL-
ROUNDER

FENDER BLUES JUNIOR

This small, all-valve amp has been around for decades and it's highly regarded for its fine tone and reliability. They're easy to pick up second-hand, and they're used in pro studios as often as student bedrooms. Even with just one channel, you can dial up a wide range of clean and overdriven tones, and there's onboard reverb to sweeten the sound. You'll find a huge choice of colours and some of the Limited Edition examples are quite sought after. When you feel it's time to change, you can even ask a tech to modify your Junior's circuitry (or at least upgrade the speaker) rather than buying a more expensive amp.

from R10 000 / noise.co.za

THE
RETRO
BARGAIN



KEMPER PROFILER HEAD

Kemper has added a radical new twist to the digital modelling concept. Rather than limiting you to factory-loaded presets, the Profiler allows you to create your own amplifier emulations. If you have a beloved old combo that you no longer want to gig with, or you find a great-sounding amp at a studio or a friend's house, you can use the Profiler to make a virtual copy. The amp ships with 200 professionally-recorded profiles to get you started, and you can also clone deep speaker cabinets and effects pedals. You can then share your profiles with other users via the internet.

R33000 / audioshop.co

THE
TECH
MARVEL

TURN IT UP TO ELEVEN



OVERDRIVE PEDALS

Many guitar amps have to be turned up to neighbour-bothering levels to distort really nicely, so guitarists generally rely on effects pedals to get rock tones at tolerable volume. Some are remarkably good at imitating the sound of overdriven valves and many are based on the Ibanez TS9 Tube Screamer – available new for around R2000. musiciansfriend.com



WAH PEDALS

Remember the theme tunes from *Shaft* or *The Professionals*? Or maybe *White Room* by Cream and *Voodoo Chile* by Jimi Hendrix? Some say tone is in the fingers, but if you want those vocal-like guitar stylings, you have to get a wah pedal. Fortunately, only R1500 will buy you a reasonably faithful reissue like the Vox V847 (above). musicexperience.co.za



FUZZ PEDALS

Fuzz has been popular since the 1960s and it's a sound you can't get from amplifiers alone. The *Satisfaction* riff is one of the earliest examples and, since then, every famous guitarist has used fuzz boxes from time to time. Hendrix's pedal guru Roger Mayer is still going strong, and for R3050 (import) his Axis Fuzz nails that tone. musik-produktiv.co.uk

6 INSTANT UPGRADES

STAND-UP PADDLEBOARDING

Sit-down paddleboarding might sound more alluring, but its vertical variant is one of the fastest-growing core strength workouts around. It's time to glide...



BUOYANCY AID

Whether you're just SUPing for a day on a hired board or have your own, a buoyancy aid should be first on your kit list. The pockets come in useful and it can stop things getting serious if you find yourself in trouble or separated from the board. Get one that fits and fasten it properly so you can't slip out of it when you take a dunking.



1 SIPABOARD

While catching a wave might give you a turn of speed on a stand-up paddleboard (SUP), on flat water you'd normally have to make do with your own paddle power. Not so with the Sipaboard. First it will inflate itself and then its impeller will propel it through the water, controlled by the remote on the paddle handle. There's also the option of an add-on LED light underneath the board to help you see the bottom, or produce an eerie glow to make you look like a paddleboarding ghost.

R23 000 (import) /
sipaboards.com



2 FANATIC CARBON 25 ADJUSTABLE PADDLE

You might not have your own board yet, but getting your own paddle is a great place to start as it affects your whole SUP experience. A nice stiff carbon paddle will give you a better feel for the water as well as better power transfer that translates to faster speed through the water. This one is also adjustable between 160 and 220cm in length to make sure your paddling stance is just right, no matter what your height and whether you're in waves or flat water.

R1450 / surfdome.com



3 KEYPOD 5G

If you need to keep your car or house keys safe but don't want to take them out onto the water with you, this locker-within-a-padlock will let you do just that. With enough room for your car key, you can clap it onto any solid object, including (most likely) your car itself. It's definitely more secure than leaving them on top of a tyre or hidden under a bush, and its 10mm steel shackle and four-digit combination lock mean you'll still have a ride home when you get back on land.

R900 / importital.co.za



4 OVERBOARD PRO-SPORTS BACKPACK

If you're planning to do long-distance paddling, you'll need somewhere to keep some extra kit safe and dry. The rolltop on this pack creates a watertight seal, keeping the H₂O on the outside, and means it can even be used for a bit of emergency flotation should the need arise. While you're out paddling you can strap it to your board, then carry it easily on your back when out of the water. It'll also hold its own in the rain.

from R1820 /
overboardafrica.co.za



5 BILLABONG SPLIT- TOE REEF SLIPPERS

In hot weather, these low-top airprene reef slippers will keep your little piggies comfortable without boiling them to death, and when you do take a dunking, they'll keep your feet safe from sea urchins and other marine scumbags. Their split-toe design helps you keep your balance — toes are surprisingly important for balance — and their rubbery exterior gives great grip on the board. Also they look better than an old pair of sneakers with seaweed in the laces.

R450 (import) /
sortedsurfshop.co.uk

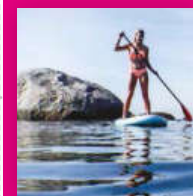


6 HURLEY PHANTOM BOARD SHORTS

You might presume everyone's staring at you because they're envious of your shiny board, but really it's because you decided to wear the Speedos you last wore at your school swimming gala. Do yourself and everyone else a favour by donning these sharp-looking boardies instead. You'll be allowed ashore again and no-one will have to wish they could unsee anything. Unlike some boardies, they also feature proper pockets, as well as belt loops to make them even more versatile.

from R900 / zando.co.za

SUP UP: PRIME PADDLE- BOARDING SPOTS



CAMPS BAY

You can pick your place in Cape Town (besides perhaps Dungeons) but Camps Bay is home to the South African SUP Wave Riding Championships. Which is an odd combo of SUP and surfing. Get out your fitness, you're going to need it come end July 2016.



EMMARENTIA DAM

SUP? In the middle of Jozi? Surely you jest? No, there's a SUP-SA sanctioned event held at Emmarentia Dam every year, a 10km race that is the only local inland event of its type. You've missed it by the spring of your teeth but we need training time anyhow.



ZINKWAZI LAGOON

Or you can opt for some coastal flat-water SUP action at Zinkwazi Lagoon. It makes a change from dodging waves, sharks and dustbin lids in the ocean or the traffic in Johannesburg, plus Zinkwazi is the home of the largest 10km SUP flat-water race in SA.



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BOOMDOCK EVOLUTION BLACK

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R5 599.95



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R3 699.95



ARENA BLUETOOTH HEADPHONES WITH MIC

Wireless connectivity Up to 10 hours play time
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R1 499.95



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USB charging port

R2 799.95



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R1 699.95



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MAIL OF THE MONTH

Q HEADPHONE HASSLES

The last two sets of headphones I purchased stopped working after a couple of months. The one earbud started failing and eventually stopped working altogether — this is not a problem with my ear, I checked. It seems like a problem with the jack where the cabling wears out or becomes disconnected. I have taken the liberty of stripping the jack to see if I can fix it or reconnect it, but the cabling is fused into the jack, preventing me from doing so. Granted, these headphones are by no means high-end (the latest pair costing R500). My question is — should I expect similar issues if I decide to upgrade to a higher-end model? The jacks on both models were L-shaped rather

than straight — should I rather purchase a model with a straight jack or switch to wireless? I would like to spend in the region of R2 500 — I would appreciate any recommendations.

Amandus

A We use headphones constantly and it is generally the cheaper sets that see wiring issues, either in the cups or the jack. You get what you pay for at the end of the day, barring factory faults. We'd definitely advocate wireless, if you can get it, but there are a whole lot of options available. Check out Sennheiser's HD 280 PRO (R2 500), the Monster DNA (R2 200) or Sennheiser Momentum On-Ear (R3 100 — takealot.com) for starters.

Q COLOUR ME BEAUTIFUL

Hi, I'm a fashion student and I want to design some clothes inspired by specific photographs. Is there a program or app that can analyse my photographs and generate specific colours and shades taken from them? Thanks very much!

Henry Denman

A Henry, it sounds like you're after a colour palette generator. Luckily there are quite a few available online for free, which let you upload any photo you like before serving up a palette shade that you can then use in Photoshop. The site Pictaculous (pictaculous.com) works pretty well.

Q A CURE FOR WHAT AILS YOU

I jumped in my car, rushed to my local Spar and grabbed a *Stuff* magazine to take my man's mind off his recent op. What an amazing mag! Best of all, thanks

to Rob Forbes' piece on the dangers of sitting I'm now sitting for a bit and walking for a bit. Thanks for the Gadget Doctor page, too. I am going to be knocking on your door regularly.

Joy

A Always glad to help out Joy, even if it's only in a passive capacity this time. Next time you have a tech issue, we'll be right here to assist.

Q A PEBBLE IN PRETORIA

I am very interested in the Pebble Steel Smart Watch. Where in Gauteng, especially Pretoria, can I buy or see a Pebble Steel Smart Watch?

Albert

A Unfortunately, it's only available online. We've spent time with the first Pebble, but it was very limited. The Steel range is a whole lot better — see the Top 10 Wearables section for a little more info.

Speak your brains to *Stuff* and you could win!
This letter wins a Thule Legend Advanced GoPro Case valued at R1199

Congratulations to our LG G4 competition winner: Jacques Van Jaarsveld and our HTC One M9 winners: Carl Bowerman, Maren Jordaan and Jerrie Combrinck

WIN

Next month's best letter wins a Thule Stravan 13in MacBook Deluxe Attache to the value of R1299.

A protective, organisational attaché for a MacBook, iPad, iPhone + accessories with water-resistant fabric and multiple carrying options.





Stuff

TOP TEN

OF EVERYTHING

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Prices quoted are the best available at the time of printing











<div>HOT BUY</div> <div>1</div>		<div>Samsung Galaxy S6</div> <div>This is a new era for Samsung, with a smart upgrade that fixes not just things that were amiss in the Galaxy S5, but things that have plagued them for years. No plastic here: its front and back are super-tough Gorilla Glass 4, its sides aluminium. In terms of ergonomics and speaker quality, HTC still wins, but only just. And in the more important areas of camera performance, screen tech and raw power, the Galaxy S6 tramples its rival. We just wish it had a microSD slot.</div>	<div>STUFF SAYS</div> <div>Samsung has proven its critics wrong – the Galaxy S6 is the new benchmark for flagship phones</div> <div>from R12 400 ★★★★★</div>
2		<div>Samsung Galaxy S6 Edge</div> <div>The Edge, with its wraparound screen, is the ultimate money-no-object phone. It's techier and beefier than its brother, but it's also a good deal pricier. Its curvy USP may be more about style than anything else, but come on, it's pretty darned cool.</div>	<div>from R16 150</div> <div>★★★★★</div> <div>BEST FOR CUTTING-EDGE GADGETEERS</div>
3		<div>LG G4</div> <div>The leather-clad LG G4 is a treat for those who want something that looks and feels a bit different. Its camera is incredibly powerful, giving you almost as much control as a DSLR, and the large screen is brilliant... but the battery life holds it back from the top.</div>	<div>R9 000</div> <div>★★★★★</div>
4		<div>HTC One M9</div> <div>This year's HTC One is not a full-on revolution, but it is a careful, considered refinement of one of the best phones ever, packing high-end specs into a premium design. The switch to a megapixel main camera results in beautifully detailed daytime shots.</div>	<div>R10 000</div> <div>★★★★★</div>
5		<div>Apple iPhone 6</div> <div>With its slim, deeply attractive build and software overhaul, the iPhone 6 is the freshest-feeling iPhone in years. Its larger screen is big enough to be a useful improvement, with gorgeous colours, and this is Apple's best ever battery.</div>	<div>from R9 900</div> <div>★★★★★</div>
6		<div>LG G3</div> <div>LG surprises us again. There's barely a single thing wrong with the G3... and so, so much that's right. Upgrades range from sleeker back buttons to the bigger, better 2K screen and laser-assisted camera. And it still lasts 15 hours. How do they do it?</div>	<div>R9 000</div> <div>★★★★★</div>
7		<div>Sony Xperia Z3 Compact</div> <div>This is, without a shadow of a doubt, the best sub-5in/12.7cm Android phone around. The power of a full-size flagship, an excellent camera and an impressive battery life are all crammed into a device that's a pleasure to use no matter the size of your digits..</div>	<div>R6 700</div> <div>★★★★★</div> <div>BEST FOR DAINTY HANDS</div>
<div>NEW</div> 8		<div>Xiaomi Mi4</div> <div>Newcomer Xiaomi is toting some impressive tech. As a value proposition they're top of the class but will they convince the SA consumer that they have what it takes to dethrone Samsung, LG and Apple? The Mi4 goes a long way to proving they can.</div>	<div>R4 000</div> <div>★★★★★</div>
<div>NEW</div> 9		<div>Huawei P8</div> <div>Huawei's newest flagship has some serious skills when it comes to its camera. It likes to play games with light but it's sadly lacking the bit of extra polish we'd expect before it can be moved higher up on the list of awesome. Get em next time.</div>	<div>from R7 400</div> <div>★★★★★</div>
<div>NEW</div> 10		<div>Sony Xperia M4 Aqua</div> <div>A mid-range smartphone that posts results that make flagship devices look nervously at their bottom line, the M4 Aqua's Xperia pedigree also makes certain that you can dunk, drown and otherwise swim with Sony's octa-core bargain handset. Wow.</div>	<div>from R4 000</div> <div>★★★★☆</div>

● Prices quoted are for handset only unless otherwise stated

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HOT BUY 1		Samsung Galaxy Note 4 Yes, the Galaxy Note 5 has been announced and we've heard good things. But we haven't had a chance to carress its keys yet so the Galaxy Note 4, with its excellent 5.7-in/14.5cm Super AMOLED screen, powerful Exynos 5433 or Snapdragon 805 chip, 32GB of storage, 16MP camera and up to 128GB of microSD-added space is still the phablet champion.	STUFF SAYS The phablet to choose when you want everything under one umbrella, from power to smarts to photo chops. from R9 000 ★★★★★
2		Apple iPhone 6 Plus Apple's first phablet and they're sitting at number 2? Did you expect anything less from the first full HD smartphone from Cupertino. Their usual iOS wizardry is in evidence, the camera is brilliant, it just takes some getting used to for Apple fans.	from R13 000 ★★★★★
3		Huawei Mate 7 Huawei's 6in/15.2cm Mate 7 doesn't really fit the bill of supreme cutting-edge but it has price and surprising performance, considering the 1.2GHz octa-core Snapdragon CPU, as well as the 13MP/5MP camera setup in its favour. Plus that massive battery. Nice.	R8 000 ★★★★★ BEST FOR THE BUDGET-CONSCIOUS
4		LG G4 Can a phone be in two places at one? Yes, it can. The LG G4, while LG's main flagship handset for 2015, is also a great phablet in its own right. With LG's stellar camera tech, that oversized 5.5in/14cm screen make this a tiny phablet but it makes the grade.	R9 000 ★★★★★
5		Nokia Lumia 1520 It's getting a little long in the tooth but the Lumia 1520 is still a great phablet. 6in/15.2cm display, a 20MP PureView camera and enough processing power to still stand proud among the newcomers are yours to command.	R8 000 ★★★★★
6		Samsung Galaxy Note Edge We're probably never going to see the like of the 2.7GHz, 3GB RAM, 32GB storage Galaxy Note Edge ever again. Not because it's a bad phablet with its 5.6in/14.2cm QHD edged display but because it's about to be supplanted by the Galaxy S6 Edge+.	from R11 200 ★★★★★
7		Google Nexus 6 A 5.9in/15cm QHD display, Android Lollipop, a Snapdragon 805, 3GB of system memory and 32GB of storage from Google? That's a phablet to be proud of. The only problem with these slick slices of hardware is that they're hard to find in South Africa.	R6 750 ★★★★★
8		Xiaomi Note Pro Xiaomi's Note Pro is the best device we've seen from the Chinese newcomer, with 5.7in/14.5cm of QHD screen, the flagship-chasing Snapdragon 810, a massive 4GB of RAM and 64GB of storage at your fingertips. It can get better but not a whole lot.	Rtb ★★★★★
9		Huawei G7 If you're search of a budget phablet then Huawei's G7 has you covered. Mid-range specs, including 2GB of RAM and 16GB of storage, and a 5.5in/14cm 720p display will give you the phablet experience at a fraction of the cost.	R4 700 ★★★★★☆
10		Sony Xperia Z Ultra The biggest, and the oldest, on the phablet list, Sony's Xperia Z Ultra is a 6.4in/16.3cm monster that packs a Snapdragon 800, water- and dust-proofing, an 8MP cam and 16GB of storage. It's due for a refresh soon as well but this is a budget beater for now.	from R5 000 ★★★★★☆

WIN 1 OF 8

clickTM
tab 7

WORTH
R1 500
EACH



SEE
PAGE
21

NOT BUY	1		Apple MacBook Pro 13in (2015) Apple hasn't changed too many parts of the MacBook Pro for 2015. There's a fancy new trackpad and the latest generation of Intel CPUs, which deliver better stamina as well as a chunk more power. This is an incremental upgrade, but given how good the Pro already was, that's more than enough to keep it right at the top of the laptop honours list. If you need power as well as stamina and portability, this is one of the best laptops money can buy.	STUFF SAYS If it ain't broke... it hasn't radically changed, but the Pro's performance and trackpad are top of its class from R19 600 ★★★★★
UPDATE	2		Asus ZenBook UX305 Asus knows what it's doing. It knows that the Apple MacBook Air laptops are treading water and the ZenBook UX305 is pretty much everything the 2015 Air should have been, with its fetching aluminium design and as good a display as any laptop.	from R12 000 ★★★★★
UPDATE	3		Microsoft Surface Pro 3 The fact that it's one of only two devices to feature in two of our Top Tens is a testament to the Surface Pro's versatility: it's a strong tablet, but its full-fat operating system and powerful innards mean it's also a worthy adversary to Ultrabooks and MacBooks.	from R17 100 ★★★★★ BEST FOR WORKING ANYWHERE
	4		Lenovo X1 Carbon This is it, the best Windows machine we've had occasion to caress in a long, long time. The Quad HD does little to lessen our esteem. So why so low down the list? Gimmicky voice and gesture control, for one, and that multi-function strip could use a little work.	R33 000 ★★★★★ BEST FOR SOOTHING YOUR EYEBALLS
	5		Apple MacBook (2015) This is no 'Air', nor 'Pro': a clear sign that this is what Apple sees as the future of the ultraportable laptop. And it's certainly very desirable: a 12in lean machine with a superb screen and haptic touchpad. However, the lack of ports can be frustrating.	from R19 600 ★★★★★
NEW	6		MSI GT80 2QE Titan We didn't nickname the Titan the Beast for nothing. MSI's monster fits the bill in every sense of the word. Power, specs, size and power draw, as well as noise. But it'll play anything and everything you toss into its gaping maw without blinking.	from R50 000 ★★★★★ BEST FOR SHOWING OFF IN PUBLIC
UPDATE	7		Aorus X7 Pro Dual GTX970M GPUs, a Core i7 4870HQ brainbox, 16GB of RAM as standard and an HD 17.3in/44cm display in one of the lightest packages you'll see make the X7 Pro the most portable desktop replacement we've ever seen. Also: All the gaming power.	from R34 000 ★★★★★
	8		Apple MacBook Air 13in (2015) Apple is scraping by with pretty much the same Air design as before. You get a new processor, new connectors and slightly improved battery life, but still no Retina screen. However, if a portable road warrior is what you're after, this is still a great choice.	from R19 000 ★★★★★☆
	9		MSI GT72 2QE Dominator Pro Big, loud and powerful, this is the SUV of gaming laptops. Even the price, which is up against the R50k mark, marks this as a serious piece of kit. The 17.3-in/44cm HD LED display, GTX 980M, 16GB RAM and the Core i7 4710 HQ silicon heart are a big clue.	R42 000 ★★★★★ BEST FOR FRAGGING NOOBS
	10		Lenovo Yoga Pro 3 The third entry in the Yoga Pro line refines the laptop/tablet hybrid design with a power-sipping new Intel Core M processor plus slimness and style to make even the MacBook Air look worried. And you can stand it up like a tent. If you want.	from R24 000 ★★★★★☆

IN CASE YOU MISSED...
ACTIONS CAMERAS



TomTom Bandit
 R180 / tomtom.com/en_za
 The company's first action cam shows plenty of promise, with video resolution up to 4K. Its headline feature is its emphasis on editing and sharing footage straight from your phone. It isn't seamless, but it's the quickest option for getting your footage out to the world.
 ★★★★★☆



GoPro Hero 4 Black
 R8000 / goprosouthafrica.co.za
 GoPro has been doing this, and only this, for a long time... and it shows. The Hero 4 has a focus on image quality and versatility that mean it's still the one to beat. Its free editing software is just as powerful, helping you to get carefully crafted vids up in no time.
 ★★★★★



Garmin Verb Elite
 R5000 / garmin.com
 The Virb is the only camera here with a slider switch to start recording. It's our favourite method of controlling an action cam as you know absolutely when it's recording or not. There are a few niggles, but the picture's great and it's excellent value for money.
 ★★★★★



4GEE Action Cam
 R5900 (import) / shop.ee.co.uk
 This camera has a SIM card slot to livestream your adventures over EE's 4G network, which only works in the UK. While it is unique, this is likely to be an underused and costly feature. The mounting system seems a bit half-baked, however, it did survive raging rapids.
 ★★★★★☆

HOT
BUY

1



Apple iPad Air 2

The iPad Air didn't really need to be thinner, but that doesn't mean 6.1mm isn't mighty impressive. This combines with reassuring weight and impeccable build quality to make this the most desirable tab on the planet. While the display is the same Retina resolution as before, clever screen tech brings the pixels closer to the surface, and the whole experience is even faster than before thanks to the new A8X chip. Basically it's the best tablet in the world made even better.

STUFF SAYS

Thinner, lighter and mightier: Apple's iron-fisted reign at the top of the tablet charts continues unabated

from R6 700 ★★★★★

2



Apple iPad Mini 2 With Retina Display

The iPad Mini 3 is out now but all it adds is Touch ID. The good news is that the Mini 2 is now down to R3 300, which is frankly bargain-tastic. That's why the 'old' model stays in our Top 10 – if you're after a mini-tablet of real quality, your choice has just got easier.

from

R4 400

★★★★★

BEST FOR
CREATIVITY
ON THE MOVE

3



Samsung Galaxy Tab S 10.5

Samsung has blessed the Galaxy Tab with one of the best tablet screens we've ever laid eyes on, plus an impressive camera and some incredible stamina – but there are performance niggles and Apple's tablet app selection is still far superior.

R10 500

★★★★★

BEST FOR
MAGAZINES
AND MOVIES

4



Samsung Galaxy Tab S 8.4

Superb screen, unique features... really, there's very little that's missing here. For us the iPad Mini beats the Samsung by a whisker for its design, performance and wider selection of optimised apps, but against other Android tabs it's a winner.

R8 700

★★★★★

5



Google Nexus 9

The design isn't as pristine, but this is a real Android contender to rival the iPads. You get the new Android 5.0 Lollipop software, bags of power and a super-sharp display. With 12 hours of video play and two front-facing speakers, it'll be a great film buddy.

R6 100

★★★★★

6



Microsoft Surface Pro 3

At last, Microsoft has delivered on the promise of the tablet-cum-laptop hybrid. It proves there's space in the world for a design that's more productive than an iPad or Galaxy Note, but easier to hump around than a traditional laptop.

from

R18 500

★★★★★

BEST FOR
USING
ANYWHERE

7



Sony Xperia Z3 Tablet Compact

A slim, light and reliable couch or commute companion, with a screen that looks brilliant despite being 'only' Full HD. The waterproofing may sway people away from choosing an iPad Mini and every gamer's eyes will light up at the mention of PS4 Remote Play.

R5 000

★★★★☆

NEW

8



Asus Transformer Book T100 Chi

While it may sit in the middle of 10in/25.5cm hybrid range on price, the Transformer Book T100 Chi is classier than the average tablet. Improvements to design, screen and keyboard quality make it a neat choice if you don't mind working with a small screen.

Rtba

★★★★☆

9



Samsung Galaxy Note 10.1 (2014)

The new 10.1 is fit to bursting with clever tricks, comes with the note-tastic S Pen and has a stunning 2560x1600 screen. But while we can forgive it its tacky looks, minor performance glitches deny it that fifth star; we hope firmware updates will fix them.

R7 400

★★★★☆

10



Mecer A801

Todd choice for a number 10, wouldn't you say? But the Mecer A801 has proved extremely popular here at home, with a price that can't be beaten, 3G data capability and enough specs to keep Windows 8.1 running along nicely. Also: R2000!

from








R2 000

★★★★☆



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HOT BUY NEW	1		Apple Watch If you want the smartwatch equivalent of a Macbook Pro then you're going to have to pay for it. But you're getting your money's worth, especially with the devices on the lower end of the price spectrum, with some excellent software and enough apps to get anything you ever wanted on your arm. Even your heart, if you would like.	STUFF SAYS Apple's wristbound wonder will make you wonder why you waited so long to get one from R9 000 ★★★★★
UPDATE	2		Pebble Steel The Steel keeps the straightforward looks, crisp display and five-day battery life that helped the standard Pebble win our hearts. But it holds more memory, apps and customisable faces, and swaps the plastic for a stylish metal suit.	R2 850 ★★★★★ BEST FOR BATTERY LIFE
NEW	3		Jawbone UP3 With its latest band, Jawbone has delivered meaningful fitness data in a stylish package. The splashproof UP3 is unobtrusive, lasts over five days and does well not to overwhelm you with stats; instead it provides useful information at relevant times.	R2 400 ★★★★★
NEW	4		Garmin Fenix 3 This is a serious sports watch. It's especially geared for triathlon, with a dedicated race mode, but it's also a great training tool for each discipline and other sports besides. It doesn't do heart monitoring, but a 10-day battery life is your compensation.	R8 500 ★★★★★☆
NEW	5		Motorola Moto 360 With its circular design, this is a smartwatch that's actually a smart watch. The Moto 360's our favourite and most comfortable Android Wear watch so far, but its battery life might make you anxious and it's a few specs short of brilliance.	from R3 500 ★★★★★☆
	6		Fitbit Charge HR The Charge HR includes the pedometer, altimeter and silent alarms of its predecessors but adds an excellent heart-rate monitor while still lasting five days between charges.	R2 300 ★★★★★ BEST FOR TRACKING YOUR LIFE
	7		Jawbone UP24 Now with Bluetooth for hassle-free syncing, the stylish UP24 is worth the extra cash over the Jawbone Up. The app introduces new challenges and tracks your sleep patterns. It will also gently nudge you, if you're lazing around, to get back on the move.	R1 900 ★★★★★
	8		Samsung Gear Live Could it be fourth time lucky for Android Wear? A waterproof 1.63in/4.14cm Super AMOLED screen, a resting heart monitor and a growing selection of apps say yes. Overall, the Samsung just pips the LG G Watch. Its pitiful one-day battery life lets it down, though.	R3 000 ★★★★★☆
	9		LG G Watch R This circular smartwatch won't win any beauty contests, but that's about its only flaw. The G Watch R's plastic OLED screen has deep blacks, sharp text and good visibility. Its battery easily lasts a day and a half, and using it is a smooth experience.	R3 550 ★★★★★☆
	10		Garmin Forerunner 620 Garmin's wealth of experience in wrist-mounted GPS shines through, offering up a cacophony of stats, including vertical oscillation (how much you jiggle while running) thanks to the smart heart-rate belt. Could be cheaper and more user-friendly, though.	from R6 350 ★★★★★☆



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HOT
BUY

1

**Samsung 55HU7200**

Want your curved 4K TV screen without having to strike a new gold mine in the Drakensburg? Samsung's 55HU7200 strikes a balance between size and price, with 55in/140cm of UHD screen coming in at under R30000. It didn't take a whole lot of time for the prices of 4K screens to drop, did it? Beats splashing out for a 105-in/266cm UHD too.

STUFF SAYS

Impress your mates who bought early, while paying a fraction of the original cost.

R25 000 ★★★★★

2

**Samsung 55HU7000**

Drop the curves and leave the screen and what do you get? A cheaper TV, obviously but the 55HU7000 isn't much of a step down, especially if you're a gamer. Only drawback? 4K content is still sparse but at least you'll be prepared for it when it lands.

R22 000
★★★★★

3

**LG 55UC970T**

Sammy can't hog all the glory and LG's 4K offerings have also quickly become a lot more accessible. Here's 55-in/140cm of curvey LG goodness, with the company's WebOS packed in for good measure, at just a little over Samsung's headliner.

R26 000
★★★★★

4

**Samsung 65HU9000**

Showoff. We can call you a showoff, right? Samsung's 9000 series is fantastic, the prices less so, which is why this lounge-hogging banana-TV is sitting just off the podium. Sure, we'd love to have one but we'd rather throw half the cost and lose a mere ten inches. Heh.

R52 000
★★★★★

5

**LG 60LB652T**

Price drops for 4K means that HD screens are cheaper than ever. So much cheaper, in fact, that you can pick up 60in/152cm for the sort of price that you used to secure a solid forty for. LG's 60LB652T is a great example, with all the HDMI and USB you can eat.

R20 000
★★★★★

6

**Hisense 60K390PA**

Locally made and cheap, but without the bells and whistles. HiSense nevertheless has some great hardware. And it's not going to cost you the Earth. Instead, you'll have an Android-capable HD TV without enough HDMI connections to set up all the things.

R16 000
★★★★

7

**Samsung 55HU6800**

If you were wondering whether it was the curve or the UHD that makes the prices go up then we can confirm: it's the UHD. But if you like the look of Samsung's curved panels then you're in luck – a curved set from South Korea will set you back under R20k.

R18 000
★★★★

8

**LG 47LB652T**

There was once a time when a 47-inch TV was out of reach for most South African homes. That times seems to have passed, with LG's 47LB652T falling under the R10k mark. For that you get 3D, HD, as well as smart TV functions from LG's webOS.

R9 000
★★★★

9

**Samsung UA48H6400AK**

This is larger, why is it lower on the list? We're pretty sure it's the price. Otherwise, though, it's a decent crack at a smart TV from Samsung while being easy enough on the pocket that you might consider adopting one to sit during major sporting events. Also: 3D.

R12 500
★★★★

10

**Philips 50FPA4509**

Fifty inches. Seven grand (or so, depending where you look). What's the catch? None really but you're going to be losing out on the smart features above as well as a couple of HDMI ports. So you're spending your cash on screen acreage and little else.

R7 000
★★★★



BRAVEN 805

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PAGE
51

WIN **1 OF 10**
BRAVEN 805's
WORTH **R2 999** EACH

HOT
BUY

1

**Sony DSC-HX60**

Last year's HX50 was our previous pick for the best compact camera around, and 2014's HX60 isn't a huge departure from its predecessor in terms of build quality, ease of use, specifications and performance — all of which are excellent. And thankfully the superb 30x zoom lens remains. What it does add is NFC (for quick pairing with a tablet or phone) and a newer Bionz X processor, making it a slightly nippier performer.

STUFF SAYS

Sturdy, simple to use and offering a huge zoom range for its size, this is a hugely capable all-rounder

R5 500 ★★★★★

2

**Sony DSC-RX100 III**

If you're looking for the best tiny snapper around, this is it. Excellent image quality, fast autofocus, a useful electronic viewfinder and professional video recording, all squeezed into a truly teeny package that'll fit into your jeans pocket. We're smitten.

R12 000

★★★★★

3

**Fujifilm X20**

The X20 isn't all retro looks and no trousers. It excels in Advanced Auto mode and has manual controls and RAW shooting for creative days. The optical viewfinder, though small, is linked to the 4x zoom and frames well. All this, *and* it looks cool.

R6 400

★★★★★

4

**Panasonic Lumix DMC-FZ200**

If you want a superzoom cam, the Lumix FZ200 wipes the floor with its rival snoopysnappers. A small and solid build is coupled with a 24x optical zoom, an excellent auto mode and spot-on exposure abilities. The downside is the video, which is a mixed bag.

R7 000

★★★★★

BEST FOR
AT-A-DISTANCE
SHOOTING

5

**Fujifilm FinePix X100S**

Fujifilm's souped up its fixed-lens retro shooter, with faster focusing and a big APS-C sensor. It's not all new, though, keeping the 35mm-equivalent f/2 lens and hybrid viewfinder from the X100. A less retro version with black finish is now available too.

R12 500

★★★★★

BEST FOR
DSLR PICS IN
A SMALL BODY

6

**Canon PowerShot G16**

The G16 packs a lot into its sturdy body: optical viewfinder, loads of manual controls and an f1.8–2.8, 28–140mm (equivalent) zoom lens. Upgrades over the G15 include Wi-Fi and faster burst shooting of up to 12fps, while image quality is as good as ever.

from

R4 800

★★★★★

7

**Nikon Coolpix AW120**

The ultimate rugged camera: almost indestructible, and fit for temperatures as low as -10°C, it will even survive a rinse cycle in your dishwasher. The AW120 also takes lovely pictures and impressive video in both good lighting and dimmer conditions.

R6 500

★★★★★

BEST FOR
EXTREME
EXPLOITS

8

**Canon PowerShot G1 X MkII**

This powerful snapper is back, with a tilting touchscreen and a wider wide-angle lens but no viewfinder. The zoom and video are still fairly underwhelming but in terms of sheer image quality there aren't many non-system cameras around that can beat it.

R9 800

★★★★★

9

**Canon PowerShot S120**

Replacing the S110, the S120 is a compact camera for DSLR users on their days off. Its 12.1MP stills, low-light prowess and useful long-exposure modes are welcome, while its slightly laggy lens-ring control and hit-and-miss Wi-Fi features take the shine off.

R4700

★★★★☆

10

**Nikon Coolpix S6700**











Your phone can probably match it for wide-angle photos in good conditions, but if you want to go equipped with a bit more creative control without loading yourself down with kit, the S6700 will be a useful addition to your gadget arsenal.

Rtba

★★★★☆











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HOT BUY 1		Olympus OM-D E-M1 Olympus' new flagship is armed with the same excellent 16.3MP sensor as its predecessor the E-M5, but now has an improved autofocus system, a startlingly good electronic viewfinder and masses of direct controls. And look out for the E-M10: pretty much an E-M5 minus the weatherproofing and with only 3-axis stabilisation, but with an improved EVF, better metering, enhanced Wi-Fi and built-in flash in a smaller, cheaper body.	STUFF SAYS Take the E-M5's amazing speed and quality, then add pro controls and you get the best system cam so far R32 000 ★★★★★ (w/ 12.40mm lens)
2		Canon EOS 700D Look, it's a new Canon at No2. No, wait, it's the old one. Actually, it's kind of both. The 700D is a minor upgrade over the 650D, keeping its 18MP sensor, flip-out touchscreen and autofocus during video and adding little beyond a new kit lens. Still great, though.	R7 900 (body only) ★★★★★ BEST FOR ALL-ROUND VALUE
3		Sony A6000 Sony's new system camera may be tiny but it packs a big photographic punch. There may be no optical image stabilisation but the incredible speed and accuracy of the A6000's autofocus is a real highlight, as is its large, clear electronic viewfinder.	R10 000 (w/ 16-50mm lens) ★★★★★
NEW 4		Canon EOS 750D The 750D redefines what an entry-level DSLR can be: it's remarkably easy to use, will help you take stunningly good photos whatever your experience level and won't ever let you down.	R7 400 (body only) ★★★★★
5		Nikon D810 The top-end Nikon D810 is a monster camera. Its image quality and performance are hard to fault – if you're a serious photographer willing to stump up the cash then it's a fantastic buy. However, there are some features missing, such as 4K video and Wi-Fi.	R53 000 (body only) ★★★★★
6		Sony A7R We love this camera. It's light weight but tough and delivers results that outstrip pretty much any other compact system camera on the market. It has a huge full-frame 36.4MP sensor and noise-suppression. Your wallet might weep, but your photo album will sing.	R27 000 (body only) ★★★★★ BEST FOR SHOOTING LIKE THE PROS
7		Nikon D600 Pro power has never come at such a reasonable price. A full-frame 24.3MP sensor combines with accurate 39-point autofocus for stunning results. Dual SD card slots, built-in flash and 5.5fps shooting speed complete a seriously powerful proposition..	R23 000 (body only) ★★★★★
8		Canon EOS 70D The 70D is Canon's best camera in years. It's the first 'proper' DSLR to nail autofocus in videos and Live View, offers a multitude of manual controls and can take stunning pics in almost any situation. Amateurs who've outgrown the entry level should look no further.	R18 000 (w/ 18-135mm lens) ★★★★★ BEST FOR ADVANCED AMATEURS
9		Fujifilm X-T1 There's lots to love about this snapper, from its clever viewfinder and lightning-speed focus to the weatherproof body. One for the analogue lovers, it has actual buttons and dials with no touchscreen. The lack of in-cam image stabilisation is our only complaint.	R15 000 (body only) ★★★★★
10		Panasonic Lumix DMC-GX7 The 16MP Panasonic is a versatile beast that, while not being much of a looker, has added tricks such as a tilting EVF and a handy touchscreen LCD. It's great for smooth hi-def video recording and, with the bijou 20mm f/1.7 lens, is a great travel companion.	R12 700 (w/ 14-42mm lens) ★★★★★



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FREE*
 delivery direct
 to your door
 offer on **p38.**

NOT BUY	1		The Witcher III: The Wild Hunt PC/PS4/Xbox One Geralt of Rivia is on his largest adventure yet and in the process of creating this vast and impressively-realised open world outing developers CD Projekt RED have demolished the competition in RPG-land. And on TV. Described as Game of Thrones meets Dragon Age, The Witcher 3 is an easy way to lose yourself in fantasy for a month or more.	STUFF SAYS Poland has set a new bar for RPG fans - one that will not be surpassed any time soon from R700 ★★★★★
NEW	2		Batman: Arkham Knight PS4/Xbox One The official ending of the Arkham trilogy is a thrill-ride of epic proportions, giving you an idea what it's like being the Bat night after night. Schedule some time off, just avoid the PC version for now.	from R800 ★★★★★
NEW	3		Bloodborne PS4 You're up for a challenge, right? Right, and you don't mind dying repeatedly in aid of figuring out what to do next - Bloodborne, from the fevered brows that brought us Dark Souls, is for you. Good luck.	from R800 ★★★★★
NEW	4		Far Cry 4 PC/PS3/ PS4/Xbox One/Xbox 360 Ignore how long this Himalayan adventure took to enter this list and instead pay attention to the elephants, mini-choppers and great-big-rocket-launchers that make Far Cry 4's honey-badger avoidance so much fun.	from R700 ★★★★★
	5		Grand Theft Auto V PC/PS3/ PS4/Xbox One/Xbox 360 Grand Theft Auto V is a cerebral shotgun blast of a game worthy of carrying on the series' mantle. The story, the sandbox and the sick-leave Stuff has put in just to play more of it... not to mention how good it makes current-gen consoles look.	from R700 ★★★★★
NEW	6		The Last of Us Remastered PS4 Joel and Ellie are on a journey that may or may not help the remaining people on the planet remain that way. Sneaking from clickers is a tense affair but you're here for the story and character interaction first and foremost.	from R650 ★★★★★
	7		Forza Horizon 2 Xbox One This is everything an open-world driving game should be. There's loads to do and it captures the feeling of driving very fast better than any other racing game, to the point where <i>Forza Horizon 2</i> could soon eclipse its older brother once and for all.	from R550 ★★★★★
	8		Call of Duty: Advanced Warfare PC/PS3/ PS4/Xbox One/Xbox 360 An improvement on last year's <i>Ghosts</i> , with some actual innovation from the series' multiplayer gameplay. We're going to be losing many, many man-hours to the Exo-powered trash-talk. Time for another support drop to come in.	from R700 ★★★★★
	9		Destiny PS4/Xbox One This isn't for everyone, and those hoping for an epic <i>Halo</i> -style campaign may be disappointed. But in every other way, <i>Destiny</i> is on a bigger, far more multiplayer level, and with the added addictive quest for loot like <i>Diablo</i> - an irresistible combination.	from R750 ★★★★★
NEW	10		Xenoblade Chronicles 3D Wii/New Nintendo 3DS/Wii U If you missed it on the Wii (most did) then you need to fix that on the New 3DS. Xenoblade Chronicles 3D will consume the spare time that you thought you had as you attempt to find out the truth about that blade. And those robotic enemies...	from R550 ★★★★★

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by HARMAN



N60 NC HEADPHONES

3999⁹⁵


Shut out the world and tune in to superior sound with these stylish, light-weight, noise cancelli
 Perfect for travel and designed for comfort, with up to 30 hours' battery life.



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 OMISSIONS EXCLUDED. OFFERS AVAILABLE AT
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HOT BUY 1		AKG K451 They've actually been around a little while now, but what put the K451 on-ears back on to our radar was an official price drop, and a real-world price of just R1500 or less. For that money they're unbeatable – awesomely agile and punchy sound wrapped up in a subtly stylish and foldable design. Add both standard and three-button control cables for maximising compatibility and there's practically no excuse for not getting brilliant sound from your phone.	STUFF SAYS Fantastic sound and great portability at an almost unbeatable price. The perfect PMP upgrade R1 500 ★★★★★
2		Bowers & Wilkins P3 Superb sound and a solid and achingly stylish design make these the best portable on-ears around. The fact that two cables come in the box – one with a mic and remote for iPhones, one without – only sweetens the already candyfloss-like deal.	R2 800 ★★★★★ BEST FOR ON-EAR EXCELLENCE
3		SoundMagic E10 Yes, we also gave the very similar SoundMagic ES20s in-ears five stars. And they thoroughly deserve it. But we chose to keep these here because the more expensive E10s still represent a killer smiles-per-cent, sound-per-rand ratio.	Rtba ★★★★★
4		Sennheiser RS220 The specialised lossless encoding and transmission system makes these the closest we've ever come to perfect wireless sound across all music types, and despite its intimidating size, the low weight and luxuriant fit helps you forget they are there.	R7 200 ★★★★★ BEST FOR ON-EAR EXCELLENCE
5		Sol Republic Master Tracks Really tough things are usually really ugly, which is why the lovely styling of the "virtually indestructible" Master Tracks headphones is so refreshing. Loud, punchy, fast and controlled, the sound is just as attractive as the design. Worth every penny.	R3 000 ★★★★★
6		Final Audio Design Adagio III Calling a pair of headphones Adagio seems a bit pretentious, but these decidedly affordable in-ears from a Japanese company that usually occupies the most bonkers reaches of high-end earn it with brilliantly detailed and endlessly attacking sound.	R1 100 (import) ★★★★★
7		Bose AE2w We're not going to pretend that the protruding Bluetooth module isn't a rather ugly touch, but what's most important is that these Bose headphones deliver wireless sound of superb quality. We'll put up with looking a wee bit daft for musical magic.	R3 800 ★★★★★ BEST FOR GREAT SOUND WITH NO WIRES
8		Sennheiser Momentum Classily styled, cushion-comfortable and smooth-sounding, the Momentums are the perfect over-ears for the dapper man about town. There's also an on-ear version – smaller and cheaper at R2 500, available in pink, blue, green and, um, ivory/brown.	R4 300 ★★★★★ BEST FOR QUALITY AND STYLE IN ONE
9		Sony MDR-1R You get the feeling Sony put everything they know about sound into these headphones, cutting no corners and sparing no expense. The result is an audiophile's delight: a "true", but still exciting sound across all music genre. Pricey and too big to lug around.	R2 500 ★★★★★
10		Harmon Kardon NC Hifi maker Harmon Kardon has managed to meet and exceed unreasonably high expectations. Noise cancelling helps you appreciate the full range, detail and balance of this rousing audio performance. Smaller CL and cordless BT models also available.	R4 500 ★★★★★

AKG
by HARMAN



Y50 HEADPHONES

Enjoy bold looks and great sound while effortlessly switching between calls and music. These on-ear headphones offer freedom of movement with a removable cable and in-line remote. Available in red, black or yellow.

1699⁹⁵



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NEXT BIG THING?



QUEUE DODGER, INC.

This sounds amaze. Sign me up. No-one likes waiting, do they? Unexpected queues are a bummer, and we even manage to get ourselves worked up about the expected ones – like going to the Post Office on a Monday morning, or driving towards a traffic jam that the GPS has already told us is there. Parents with double prams huff and puff in the queue at the newest Burger King store and fail to see the correlation of their contribution to overpopulation. The wait, and the angst, will eventually pass. But if only tech could step in at this point...

Yay, tech! What's it going to do? It's going to tell you how busy a place is before you get there. Crucially, though, it's not going to show you. Public access webcams, although brilliant for not really learning anything quantifiable about snow depth at a ski resort but getting giddy about your holiday, are not acceptable for small-scale deployment, because privacy. But a new infrared sensor called Density – and more importantly, the data output API – is going to tell you, historically or in real-time, whether there's a table free at Rocamamas.

Mmm, handy. But not world-changing. Think broader. You might be one of the increasing number of people who've shunned a traditional office in favour of rent-a-desk, and knowing whether there's a workspace free could make a huge difference to your day. And think museums, libraries, theatres. Conversely, some people prefer to go to the gym when it's busy, so that information will be available to them. Plus, it's a two-way channel: a Density-monitored shop might choose to notify its subscriber base of a flash 15% discount during a quiet period. Saving time *and* money? Dreamy.

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#INSIDEOUT

A LAPTOP WHEN YOU NEED IT A TABLET WHEN YOU WANT IT

Why choose between a laptop or a tablet? 2 in 1 devices with Intel[®] processors deliver a transformative experience for work and play on-the-go. Get the best of both worlds with a cutting edge design and ultra-fast performance all in one device. Easily switch between productivity and entertainment in a flash. Step into the next dimension with Intel[®].

ULED TV



ULTIMATE

Response Time | Contrast | Brightness

TV's differ in terms of features and specifications which ultimately impacts picture quality and price. Hisense has just released its Ultra LED (ULED) TV range, which includes ultra-high-definition models. ULED, an enhanced version of LED TV technology, divides the backlight into 240 independently controlled zones, which enhances contrast to create a more vivid colour experience. Its ultra-dimming technology enables it to render more detailed imagery. Hisense's ULED 2.0 technology can finally fulfil your desire for the best picture quality, colour and ultimate viewing experience.



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